symantec™

Norton SystemWorks™ 2003

Professional Edition

User's Guide

Norton SystemWorks™ Professional Edition User's Guide

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If you're installing Norton SystemWorks Professional Edition for the first time

Start here

Determine which file system your computer uses.

1 **On your desktop, double-click My Computer, right-click drive C, then click Properties.**

? **Which file system are you using?**

- FAT (Windows 98/Me/2000/XP)
  See "If you use a FAT file system" on page 6.
- NTFS (Windows 2000/XP only)
  See "If you use an NTFS file system" on page 7.

For detailed instructions and an animated Web tutorial that walks you through each step of the process, go to www.service.symantec.com/installtutorial

If you use a FAT file system

Check for viruses that affect installation.

1 **Insert the Norton SystemWorks Professional Edition CD into your CD-ROM drive and restart your computer.**

If you do not have a Norton SystemWorks Professional Edition CD or cannot start your computer from a CD, create Emergency Disks on another uninfected computer.

See "Create Emergency Disks" on page 28.

2 **Run a full system scan.**

? **Was a virus found?**

- Yes
  Run a virus scan again using the Delete switch.
- No
  See "Finish installation" on page 8.

For detailed instructions and an animated Web tutorial that walks you through each step of the process, go to www.service.symantec.com/installtutorial

If you use an NTFS file system

Check for viruses that affect installation.

Can you establish a connection to the Internet?

- **Yes**
  Go to http://security.symantec.com and follow the on-screen instructions to scan for threats.
- No
  For Windows XP: Go to service.symantec.com
  For Windows 2000: Go to service.symantec.com
  See "Finish installation" on page 8.

Was a virus found?

- Yes
  Write down the name of the virus and go to http://securityresponse.symantec.com to locate specific removal instructions.
- No
  If you have not already done so, install Norton SystemWorks Professional Edition.

  See "Finish installation" on page 8.

For detailed instructions and an animated Web tutorial that walks you through each step of the process, go to www.service.symantec.com/installtutorial

Finish installation

After you've checked for viruses, it's safe to install Norton SystemWorks Professional Edition.

1. **Uninstall any other antivirus programs on your computer.**

   On your desktop, use the Add/Remove Programs Control Panel to select the program to uninstall.

2. **Close all open programs on your computer including the items running in the Windows system tray.**

3. Install Norton SystemWorks Professional Edition from the Norton SystemWorks Professional Edition CD.

   See "Install Norton SystemWorks Professional Edition" on page 44.

? **Did you see the message "Norton SystemWorks Professional Edition has been installed successfully"?**

- Yes

  See "After installation" on page 47.

- No

  Write down the error message on the screen and go to http://service.symantec.com for further assistance.

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1

Getting started

Emergency procedures

1

If you have an emergency, read this section to try to find the solution to your problem. Common problems include virus threats, trouble restarting your computer, and missing files.

If your computer is having any of these problems, do not install Norton SystemWorks Professional Edition. Read this section first and use the recommended fixes.

If you suspect that you have a virus

Before proceeding, check your computer's file system. The procedures for disinfecting your computer are different for FAT and NTFS file systems. See "If you're installing Norton SystemWorks Professional Edition for the first time" on page 5.

If you need to start your computer from an uninfected disk to remove a virus, you can use the Norton SystemWorks Professional Edition CD as an Emergency Disk to start the computer and remove the virus.

If your computer won't start from your hard disk

If you are unable to start your computer because of a virus threat or damage to your hard disk, you can use Norton SystemWorks Professional Edition tools to start your computer and repair your hard disk.

If Windows doesn't start

If you are having startup or disk problems, you can do one of the following:

Suggestion	For more information
Restart your computer from your Windows Startup Disk, and then use the utilities on the Norton SystemWorks Professional Edition CD to repair your problem.	See "If you have your Windows Startup Disk" on page 22.
If you have access to another computer, you can use the Norton SystemWorks Professional Edition CD to create a set of Emergency Disks.	See "If you have access to another computer" on page 23.
If you suspect that your computer has a virus, you can restart from the Norton SystemWorks Professional Edition CD and scan your computer's hard disk for viruses. The DOS-based Norton AntiVirus uses the virus definitions from the Norton SystemWorks Professional Edition CD, and will not be as up-to-date as virus definitions that are downloaded using LiveUpdate.	See "Start from the CD and scan for viruses" on page 23.
Restart your computer from a set of Emergency Disks and repair your hard disk using DOS-based Norton Utilities tools. DOS programs do not support NTFS formatted disks.	See "Create Emergency Disks" on page 28.

If you have your Windows Startup Disk

If you have the Windows Startup Disk that came with your computer, you can restart from it and run the *DOS-based* Norton Disk Doctor, UnErase, UnFormat, and Disk Editor from the Norton SystemWorks Professional Edition CD. See "Troubleshoot disk errors in Windows 98/Me" on page 234.

To learn how to create a Windows Startup Disk, consult the instruction manual that came with your computer.

To start from your Windows Startup Disk and run DOS-based utilities from the Norton SystemWorks Professional Edition CD

1. Insert the Windows Startup Disk into your floppy disk drive.
2. Insert the Norton SystemWorks Professional Edition CD into the CD-ROM drive.
3. Restart your computer.
   When your computer restarts, the drive letters might have changed from their normal designations.

See "Troubleshoot disk errors in Windows 98/Me" on page 234.

4. At the DOS/Command Prompt, navigate to the CD and launch the Norton Utilities tool that you want to use.

See "DOS-based troubleshooting list" on page 235.

If you have access to another computer

If you have access to another computer, you can use the Norton SystemWorks Professional Edition CD to create a set of Emergency Disks. These disks can be used to restart your computer and repair damage to your hard disk. See "Create Emergency Disks" on page 28.

To restart from Emergency Disks and run DOS-based utilities

1. Insert Emergency Disk 1 into your floppy disk drive.
2. Restart your computer.
   When your computer restarts, the drive letters might have changed from their normal designations.

See "Troubleshoot disk errors in Windows 98/Me" on page 234.

3. At the DOS/Command Prompt, navigate to the CD and launch the Norton Utilities tool that you want to use.

Start from the CD and scan for viruses

You might need to change your computer's BIOS Setup options to start from the CD-ROM drive. See "I cannot start from drive A or my CD" on page 228.

To start from the CD and scan for viruses

1. Insert the Norton SystemWorks Professional Edition CD into the CD-ROM drive.
2. Restart your computer.
   Your computer displays the following information:
   - 1 Boot from Hard Drive
   - 2 Boot from CD-ROM

3 Press **2 Boot from CD-ROM** to restart from the Norton SystemWorks Professional Edition CD so that the DOS version of Norton AntiVirus can scan your hard disk for viruses.
If you select 1 Boot from Hard Drive, your computer restarts normally.

4 When the DOS version of Norton AntiVirus has finished scanning, remove the Norton SystemWorks Professional Edition CD from your CD-ROM drive.

5 Restart your computer.

6 If you forget to remove the Norton SystemWorks Professional Edition CD from your computer before you restart, press **1 Boot from Hard Drive** to restart your computer normally.

If a file is deleted or missing

If you can't find a file, you can search for it before installing Norton SystemWorks Professional Edition.

Problem	Recommendation
If a file that you wanted to keep has disappeared or been deleted and you don't have a backup copy, use UnErase Wizard to search for and recover it. To avoid this problem in the future, keep up-to-date backups of your files.	See "Recovering missing or erased files" on page 161.
To avoid overwriting missing files, do not install Norton SystemWorks Professional Edition if you haven't already. If you are able to run Windows, you can run UnErase Wizard from the Norton SystemWorks Professional Edition CD.	See "Start utilities from the CD" on page 62.
If you can't start Windows, create an Emergency Disk set and use the DOS version of UnErase.	See "Create Emergency Disks" on page 28.

If you need to recover data from unrecoverable files

Disk Editor (Diskedit.exe) is a full-featured, sector-editing tool that is capable of accessing virtually any area of a hard or floppy disk. You can edit files and directories, the *partition* table, the *boot record*, and the file allocation tables (FATs) on most hard disks. You can treat any group of clusters or sectors as an object to view and edit.

Disk Editor requires that you are familiar with the inner workings of disks. You must understand what you are doing before you edit any area of a disk. Otherwise, you could make the data on the disk inaccessible.

See "Use online Help" on page 94.

The Norton SystemWorks Professional Edition online Help contains instructions for using Disk Editor.

If you need to remove unwanted files

See "Removing unwanted files and programs" on page 191.

Norton CleanSweep improves your computer's performance by removing files and *programs* that you no longer need, while protecting the files that you do need.

If you need to revert a damaged disk

See "Revert your hard disk with GoBack 3 Personal Edition" on page 107.

If you have installed GoBack 3 Personal Edition, you can use it to revert your hard disk to a state when the file was available.

See "Copying disk images with Norton Ghost" on page 209.

Norton Ghost creates disk image *clones* that can be used to recover lost files or damaged disks.

After recovering from an emergency

When your computer is stable, you can install Norton SystemWorks Professional Edition and perform the following activities.

Action	Why you should do it
Install Norton SystemWorks Professional Edition	Once you've repaired the damage to your computer, you can install Norton SystemWorks Professional Edition and fix any remaining problems. See "Installing Norton SystemWorks Professional Edition" on page 41.
Update virus protection	After you install Norton SystemWorks Professional Edition, run LiveUpdate to ensure that you have the most updated virus definitions and program files. See "Keeping current with LiveUpdate" on page 113.
Perform a One Button Checkup	One Button Checkup tests for common problems on your computer. See "Perform a One Button Checkup" on page 63.
Repair disk problems	Use Norton Disk Doctor to repair disk damage. See "Check your disk with Norton Disk Doctor" on page 149.
Recover missing files	Use UnErase Wizard to recover missing files. See "Recover a file with UnErase Wizard" on page 162.
Optimize your hard disks	Fragmented files can slow your computer and cause problems. Speed Disk defragments and optimizes your hard disks. See "Optimize disks" on page 169.
Set a virus protection schedule	In Norton SystemWorks Professional Edition, you can schedule Norton AntiVirus to scan your computer regularly to ensure that it is protected. See "Schedule scans" on page 128.
Set Norton System Doctor sensors	Norton System Doctor sensors let you monitor different aspects of your computer's activity so that you can make adjustments to the number of programs that are running and to the available space and fragmentation level of your hard disk. See "Monitor your computer's health" on page 145.

Action	Why you should do it
Maintain a disk history with GoBack 3 Personal Edition	GoBack 3 Personal Edition is included on the Norton SystemWorks Professional Edition CD. It tracks every change that you make on your computer and lets you revert your hard disk to an earlier state if a problem occurs after you install software or experience a virus attack. See "Revert your hard disk with GoBack 3 Personal Edition" on page 107.
Create an image of your hard disk with Norton Ghost	Once you've repaired the damage to your disk with Norton Disk Doctor and Norton AntiVirus, you might want to clone an image of your hard disk with Norton Ghost. You can copy disk images to removable media, and then restore entire images or individual files and directories. Norton Ghost lets you restore your disk to the cloned state if something goes wrong. You can also use the standalone Ghost Explorer utility to restore individual files or entire directories from a cloned disk image. If you are not able to repair damage to your disk, a cloned image could let you salvage data. You could then use Ghost Explorer and Norton UnErase to restore files to a new disk. See "Copying disk images with Norton Ghost" on page 209.

Stay prepared for emergencies

It is important that you are prepared in case your computer is infected by a virus or damaged due to a system *crash*.

To prepare for emergencies

❖ Do the following:

- Regularly back up files and keep more than just the most recent backup.
- If your computer cannot start from a CD, create a set of Emergency Disks from which you can start your computer and scan for viruses.

See "Create Emergency Disks" on page 28.

- If you are using Windows 98/Me, you can also create a set of Rescue Disks with which you can start your computer in *DOS* mode and use Norton AntiVirus to fix virus-related problems and Norton Utilities tools to recover from system crashes or recover lost files.

See "Create and use Rescue Disks" on page 70.

Create Emergency Disks

Emergency Disks are floppy disks that can be used to start your computer, scan for viruses, and repair disk damage.

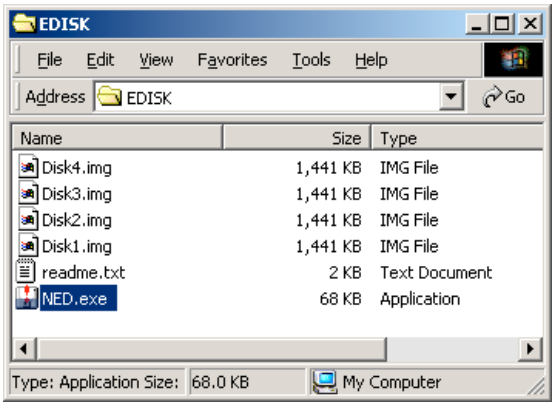
If your computer can start from a CD, you do not need to create Emergency Disks. Use the Norton SystemWorks Professional Edition CD to restart and scan for viruses.

If your computer cannot start from its main hard disk, from the Norton SystemWorks Professional Edition CD, or from your computer's original Windows System CD, you can create Emergency Disks on another computer. You will need several formatted 1.44 MB disks.

To create Emergency Disks

1. Insert the Norton SystemWorks Professional Edition CD into the CD-ROM drive.
2. Click **Browse CD**.
3. Double-click the **Support** folder.

4 Double-click the **Edisk** folder.



5 Double-click **NED.exe**.

6 In the Norton Emergency Disk Creation Utility dialog box, click **OK** to respond to the welcome message.

7 Label the first disk as instructed and insert it into drive A.

8 Click **Yes**.

9 Label and insert the subsequent disks when prompted.

10 When the procedure is complete, click **OK**.

11 Remove the final disk from drive A and store the Emergency Disk set in a safe place.

About Norton SystemWorks Professional Edition

2

Norton SystemWorks Professional Edition is a utility suite that protects your data from viruses, finds and fixes problems, removes unneeded files, helps you back up your data, and keeps its *program* files up-to-date.

Its programs include One Button Checkup, Web Tools, Norton Utilities, Norton AntiVirus, Norton CleanSweep, Norton Ghost, and their related tools and components. Norton SystemWorks Professional Edition also includes versions of Roxio GoBack 3 Personal Edition, Performance Test, Process Viewer, and Web-based services in Symantec Web.

Component	Description
Norton SystemWorks suite	As well as providing Norton AntiVirus, Norton Utilities, Norton CleanSweep, and their related tools and components, the suite includes One Button Checkup, Web Tools, and Extra Features. See "Norton SystemWorks Professional Edition features" on page 32.
Norton AntiVirus	Provides comprehensive virus prevention, detection, and elimination software for your computer. It finds and repairs *infected files* to keep your data safe and secure. See "Norton AntiVirus feature descriptions" on page 34.

Component	Description
Norton Utilities	Helps you recover from computer problems such as damaged disks, accidental file deletions, sluggish performance, and even system *crashes* that might erase startup and configuration settings, making your computer unusable. See "Norton Utilities feature descriptions" on page 36.
Norton CleanSweep	Improves your computer's performance by finding and removing files you no longer need. It eliminates space-filling temporary and Internet browser files while protecting vital files, programs, and Windows settings. See "Norton CleanSweep feature descriptions" on page 38.
Norton Ghost	Lets you clone and image your hard disk. Use the cloned images to restore the settings of a damaged disk, or to migrate data files, applications, and system settings from one computer to another one. See "Norton Ghost feature descriptions" on page 38.
GoBack 3 Personal Edition	Records incremental changes to your hard disks as you work. If an unsuccessful change causes your computer to become unstable, it lets you revert your disks to an earlier, more stable state. See "Revert your hard disk with GoBack 3 Personal Edition" on page 107.

Norton SystemWorks Professional Edition features

You can access most programs in the Norton SystemWorks Professional Edition main window or in the Norton SystemWorks Professional Edition

CD window. Some programs require a separate installation procedure. Norton SystemWorks Professional Edition includes the following features:

Enhanced One Button Checkup	Performs a comprehensive diagnosis of your computer. One Button Checkup finds disk and Windows problems, performance problems, and virus vulnerabilities. You can view a history of previous repairs, and undo them if necessary. When it is installed, One Button Checkup is scheduled to run weekly. You can customize the schedule. See "Perform a One Button Checkup" on page 63.
Web Cleanup	Scans your computer for unnecessary files that have been left on your computer after you browse the Internet with Internet Explorer. You can delete these files or view them and decide which ones to keep. See "About Web Cleanup" on page 99.
Connection Keep Alive	Helps maintain your dial-up connection to the Internet, even when your computer is idle. See "About Connection Keep Alive" on page 104.
PerformanceTest	This trial version of PerformanceTest runs benchmark and diagnostic tests that compare your computer's performance with the performance of other typical computer systems. See "Install other products from the CD" on page 51.
Process Viewer	Displays the activities that are currently running in your computer's memory. Among other things, it gives you the full list of DLLs for each running process, including the full path and version information for each loaded module. It also shows memory, threads, and DLL usage for every process. Process Viewer is installed with Norton SystemWorks Professional Edition.

Symantec Web	Web based tools that provide additional ways to assist you and protect your computer. They include the following: ■ Tech24.com Provides online advice and assistance for your computer problems and questions ■ Symantec Security Check Tests your computer's exposure to online security intrusions and virus threats See "Access Extra Features" on page 70.
GoBack 3 Personal Edition	System recovery software that records all changes to your hard disk and lets you revert your hard disk back to an earlier state if a change causes your computer to become unstable. You can install GoBack 3 Personal Edition from the Norton SystemWorks Professional Edition CD. See "Revert your hard disk with GoBack 3 Personal Edition" on page 107.

Norton AntiVirus feature descriptions

Norton AntiVirus consists of a memory-resident program, Auto-Protect, and a scanning feature that you can schedule or run manually.

The *Norton AntiVirus User's Guide* PDF, NAV2003.pdf, includes extensive information about viruses and how they spread. You can access the PDF on the Norton SystemWorks Professional Edition CD. See "Access the User's Guide PDFs" on page 95.

Norton AntiVirus includes the following features:

Instant messenger protection	Provides virus protection for instant messenger attachments.
Worm Blocking	Protects your outgoing emails from infecting other computers if you receive an infected email.
Password protection	Protects Norton AntiVirus options from unauthorized changes.
Log Viewer	Provides more detailed information about virus protection activities.

Virus definition service	Updates your virus definitions automatically or manually. See "Keeping current with LiveUpdate" on page 113.
Bloodhound technology	Detects new and unknown viruses by analyzing an executable file's structure, behavior, and other attributes such as programming logic, computer instructions, and any data contained in the file. See "What to do if a virus is found" on page 131.
Script Blocking	Detects Visual Basic- and JavaScript-based viruses without the need for specific virus definitions. It monitors the scripts for virus-like behavior and alerts you if it is found. See "What to do if a virus is found" on page 131.
Auto-Protect	Loads into memory when Windows starts, providing constant protection while you work. Checks for viruses every time you use software programs on your computer, insert floppy disks or other removable media, access the Internet, or use document files that you receive or create. Monitors your computer for any unusual symptoms that may indicate an active virus. See "If a virus is found by Auto-Protect" on page 133.

Norton Utilities feature descriptions

Norton Utilities includes the following features:

Speed Disk Windows 98/Me/2000/XP	Improves system performance by reorganizing the contents of your disk so that your files are stored in adjacent clusters, improving chances of recovering erased files. It works with Windows 98 Application Launch Accelerator to make your programs load faster. See "Optimize disks" on page 169.
Norton Optimization Wizard Windows 98/Me	Optimizes the internal structure of the registry, reducing its size on your hard disk and speeding access time to the vital information it contains. It also sets your swap file's minimum size to the optimum setting for your system and works with Speed Disk to move the swap file to the front of your hard disk for maximum efficiency. See "Optimize registry and swap files" on page 179.
Norton System Doctor Windows 98/Me/2000/XP	Monitors and analyzes various parts of your computer, including disk and CPU usage, disk integrity, system integrity, network throughput, Internet site access time, and more. See "Monitor your computer's health" on page 145.
UnErase Wizard Windows 98/Me/2000/XP	Locates and recovers files that are protected by Norton Protection or the Windows Recycle Bin. See "About UnErase Wizard" on page 162.
Norton Protection Windows 98/Me/2000/XP	Adds extra data recovery protection to the Recycle Bin. When used in conjunction with UnErase Wizard, it provides the most complete recovery system for all deleted or overwritten files. See "About Norton Protection" on page 161.
Norton Disk Doctor Windows 98/Me/2000/XP	Performs a series of surface analysis tests to ensure the integrity of your disks and repairs problems. It works alone or with Norton System Doctor, continuously monitoring for disk problems and alerting you when they occur. See "When to use Norton Disk Doctor" on page 148.

Norton WinDoctor Windows 98/Me/2000/XP	Performs a series of tests to diagnose and fix most Windows problems. It works alone or with Norton System Doctor, continuously checking for Windows problems, and alerts you when they occur. See "Find and fix Windows problems" on page 154.
System Information Windows 98/Me/2000/XP	Reports on common device information as well as hard-to-find details about your computer, including memory, logical and physical characteristics of your disks (including partitions), network connections, and your Internet connection. See "Use System Information" on page 144.
Wipe Info Windows 98/Me/2000/XP	Permanently removes unwanted files so that they never can be recovered by a file recovery program. It can also wipe the free space on your hard disk, ensuring that previously deleted information is not left on your hard disk. See "Eliminating data permanently" on page 183.
Image Windows 98/Me	Creates a snapshot of critical disk information: The boot record, file allocation tables (FAT), and root directory data. UnErase Wizard, UnFormat, and Norton System Doctor use this information. For more information, see the online Help.
Norton File Compare Windows 98/Me	Compares two versions of the same file and displays the differences. For more information, see the online Help.
Registry management Windows 98/Me	Norton Registry Tracker monitors changes to your computer's critical setup data and startup files, including Windows registry keys and .ini files. Norton Registry Editor lets you edit the Windows registry. Its Undo feature makes it safer to use than other registry editing tools. For more information, see the online Help.
DOS-based repair and recovery Windows 98/Me MS-DOS or PC-DOS	Fix computer problems using DOS-based Norton Disk Doctor, UnErase, UnFormat, and Disk Editor. These tools are also provided on Rescue Disks and Emergency Disks that you can create from the Norton SystemWorks Professional Edition CD. See "Troubleshoot disk errors in Windows 98/Me" on page 234.

Norton CleanSweep feature descriptions

Norton CleanSweep consists of several tools that you can use individually or in combination.

Fast & Safe Cleanup	Frees hard disk space by finding and deleting files that are safe to remove, such as temporary files, Internet browser cache files, and the files in the Windows Recycle Bin. See "Removing unwanted files and programs" on page 191.
Smart Sweep/Internet Sweep	Smart Sweep removes unwanted files and programs. See "Removing unwanted files and programs" on page 191. Internet Sweep removes unwanted cache files, cookies, plug-ins, and ActiveX controls installed from the Internet. See "Removing Internet clutter" on page 197.
Backup Wizard	Backup Wizard compresses and backs up infrequently used programs.
Restore Wizard	Restore Wizard ensures that all of a program's related files are restored when you want to use the program again. See "Backing up and restoring programs" on page 203.

Norton Ghost feature descriptions

Norton Ghost includes the following features:

Expanded functionality within Windows.	See "How Norton Ghost works" on page 211.
Ability to clone one partition or hard disk to another, creating an exact copy of the original.	See "How Norton Ghost clones your computer" on page 212.

Capability to perform a full system backup and restore of your computer. Once you have created a backup, you can quickly restore a computer to the last backup copy.	See "Back up a hard disk or partition" on page 216. See "Restore your computer from an image file" on page 217.
Expanded support for writable media, including CD and DVD formats.	See "Copying disk images with Norton Ghost" on page 209.

A set of Norton Ghost tutorials is accessible from the Norton Ghost program, and the *Norton Ghost User's Guide* is available on the Norton SystemWorks Professional Edition CD.

See "Use online Help" on page 94.

For more information about these features, see the online Help.

Installing Norton SystemWorks Professional Edition

3

Before installing Norton SystemWorks Professional Edition, take a moment to review the system requirements. Windows 98/Me users should have some blank 1.44 MB disks available to make Rescue Disks.

If you have an emergency, do not install Norton SystemWorks Professional Edition and do not start Windows. Any new files copied to your hard disk might overwrite existing data. Starting Windows also writes to your hard disk. The Windows swap file could overwrite data that you wish to recover. See "Emergency procedures" on page 21.

System requirements

In Windows 2000/XP, you must have *Administrator access rights* to install Norton SystemWorks Professional Edition and to run some features. If you are an Administrator and share your computer with others, remember that the changes you make apply to everyone who is using the computer.

Releases of Windows 95, Windows NT, and the server editions of Windows 2000 and Windows XP are not supported.

To use Norton SystemWorks Professional Edition, your computer must have one of the following Windows operating systems:

- Windows 98, 98SE
- Windows Me
- Windows 2000 Professional
- Windows XP Professional or Windows XP Home Edition

Your computer must also meet the following minimum requirements.

Operating system	System requirements
Windows 98/Me/ 2000 Professional	■ Intel Pentium processor at 133 MHz or higher, or AMD K5• processor at 133 MHz or higher ■ 32 MB of RAM (64 MB for Windows 2000 Professional) ■ 180 MB of available hard disk space for typical installation ■ CD-ROM or DVD-ROM drive ■ Super VGA (800 x 600) or higher resolution video adapter and monitor ■ Microsoft Internet Explorer 5.01 or higher (5.5 recommended)
Windows XP Home Edition/ Professional	■ Intel Pentium processor at 300 MHz or higher, or AMD K6• /Athlon• /Duron• Family processor at 300 MHz or higher ■ 128 MB of RAM ■ 180 MB of available hard disk space ■ CD-ROM or DVD-ROM drive ■ Microsoft Internet Explorer 5.01 or above (5.5 recommended)

Norton AntiVirus email and instant messenger support

Norton AntiVirus protects *POP3* and SMTP compatible *email* clients. It also protects the following instant messenger clients:

- AOL Instant Messenger (minimum version 4.7)
- Yahoo! Instant Messenger (minimum version 5.0)
- MSN Messenger and Windows Messenger (minimum version 4.6)

Norton Ghost requirements

For disaster recovery using Norton Ghost, you must have one of the following drive types:

- Floppy disk drive
- Writable CD-ROM or DVD-ROM drive

To use the Norton Ghost backup capability, you must have one of the following devices and appropriate media:

- An available *local partition*
- A secondary or external hard disk, Zip disk, or other mass storage device
- CD-R/RW or DVD-R/RW device (DVD supported formats include +R, +RW, -R, and -RW)
- Access to a mapped *network* drive
- SCSI or ATAPI (QIC157) tape device

Extra Features requirements

GoBack 3 Personal Edition by Roxio requires the following disk space:

- 200 MB of available hard disk space
- Approximately ten percent of your total hard disk space for GoBack history (configurable)

PerformanceTest by Passmark has the following requirement:

- DirectX 8.0

Before installation

See "What to do if a virus is found" on page 131.

Before installation, Norton SystemWorks Professional Edition automatically scans the computer's memory for viruses. If a virus is found, you can respond to the *alert*.

Prepare your computer

If you have a previous version of Norton SystemWorks Professional Edition, Norton AntiVirus, Norton Utilities, Norton CleanSweep, or Norton Ghost installed, you must uninstall it before you can install Norton SystemWorks.

You must also uninstall any other antivirus *programs* on your computer. For more information, see the user documentation that came with that program.

Before installation, you can do the following:

Task	For more information
Scan for viruses or examine your hard disk while you have restarted from the Norton SystemWorks Professional Edition CD.	See "Start from the CD and scan for viruses" on page 23.
Run Norton Disk Doctor, Norton WinDoctor, or other utilities from the Norton SystemWorks Professional Edition CD.	See "Start utilities from the CD" on page 62.
If your computer cannot start, use another computer to create Emergency Disks.	See "If your computer won't start from your hard disk" on page 21.

Install Norton SystemWorks Professional Edition

Install Norton SystemWorks Professional Edition from the Norton SystemWorks Professional Edition CD.

To install Norton SystemWorks Professional Edition

See "If the CD window does not appear" on page 47.

1 Insert the Norton SystemWorks Professional Edition CD into the CD-ROM drive.

See "If you suspect that you have a virus" on page 21.

2 In the Norton SystemWorks Professional Edition window, click **Install Norton SystemWorks**.
If you suspect that your computer has a virus, you should not install Norton SystemWorks Professional Edition. A message informs you to restart from the Norton SystemWorks Professional Edition CD or a Windows Emergency Disk.

3 Click **OK** to accept the message.

4 In the Installation Wizard window, click **Next**.

5 In the License Agreement window, click **I accept the license agreement**, then click **Next**.
If you decline, you cannot continue with the installation.

6 Do one of the following:

- To confirm the default Destination Folder location, click **Next**.
- To select a different Destination Folder, click **Browse**, then select any directory whose name does not contain an apostrophe.

7 Select an installation type.
Your choices are:

Typical	The most common programs. This is the best choice for most users. Features that are not installed are Norton File Compare, Norton Registry Editor, Norton Registry Tracker, Wipe Info, and Image.
Complete	All programs. This is the best choice for users who want to take advantage of all the product features.
Express	The same programs as Typical, but fewer prompts.

In the Select Features list you can view a list of the components and programs that will be installed, and add or remove components from the list. See "Select features to install" on page 46.

8 When you have selected an installation type, click **Next**.

9 Review the summary of your installation selections, then click **Next**.
The Norton SystemWorks Setup window displays installation progress. Depending on your computer system speed, this can take a few minutes.
At the end of installation, you are instructed to remove any disks from their drives (including the Norton SystemWorks Professional Edition CD).

10 In the Installation Complete message, click **Finish**.
When you restart your computer, the Information Wizard will display a summary of installed settings, let you register Norton SystemWorks Professional Edition, and help you download the latest virus definitions for Norton AntiVirus.

11 Click **Yes** to restart your computer.

Select features to install

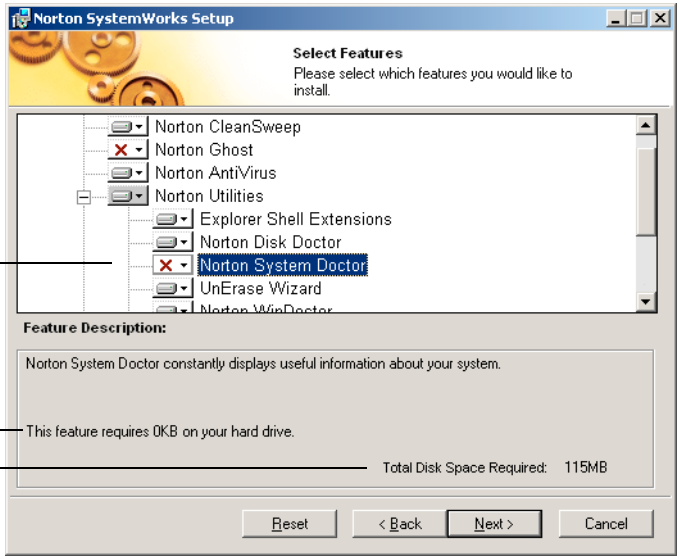
During installation, if you select the Complete or Typical installation type, you can select the component programs that you want to install. You can also check how much hard disk space is required by each program and its components.

To select features to install

See "Install Norton SystemWorks Professional Edition" on page 44.

1 Start the Norton SystemWorks Professional Edition installation procedure.

2 In the Norton SystemWorks Setup dialog box, in the Select Features list, select a feature.
As you select the feature, its description and an estimate of the required hard disk space appears in the text area below the list.



Some features can be expanded to display sub programs and components.

3 In the Select Features list, expand or collapse features to view all available components.

4 For each feature, select one of the following:

- Will be installed on local hard disk.
- Entire feature will be installed on local hard disk.
- Entire feature will be unavailable.
  Programs that are marked with an X are not installed.

5 Continue selecting features to include or exclude from the installation.

6 Click **Next** to continue the installation.
If the installation is cancelled, some files and folders may be left behind on your computer.

If the CD window does not appear

Sometimes a computer's CD-ROM drive does not automatically start a CD. If the Norton SystemWorks Professional Edition CD window does not appear on your Windows desktop, you might have to start it manually.

To start the Norton SystemWorks Professional Edition CD

1 On your desktop, double-click **My Computer**.

2 In the My Computer window, double-click the icon for your CD-ROM drive.

3 In the Norton SystemWorks Professional Edition CD file list, double-click **NCDSTART.EXE**.

After installation

You must restart your computer after installing Norton SystemWorks Professional Edition. After it restarts, the Information Wizard steps you through registration, gives you access to the Readme file, summarizes the installation settings, and completes the installation setup.

If you bought your computer with Norton SystemWorks Professional Edition already installed, the Information Wizard appears the first time you start Norton SystemWorks Professional Edition. You must accept the license agreement that appears in the Information Wizard in order to activate Norton SystemWorks Professional Edition.

Restart your computer

After installation, you may receive a prompt telling you that you need to restart your computer. Until you restart, you might not be protected from virus threats.

To restart your computer

- In the Restart your computer dialog box, click **Yes**.
  If you click No, configuration of Norton SystemWorks Professional Edition is not complete until you restart your computer.

Use the Information Wizard

The Information Wizard lets you register your copy of Norton SystemWorks Professional Edition, get information about the virus protection subscription service, and review the installed program settings.

If you choose not to register the software using the Information Wizard or if registration fails for some reason, you can register on the Symantec Web site at www.symantec.com or by using the Registration button in the About Norton SystemWorks window, which is accessed from Help. On the Web site, go to the Products page for the registration link. In the About Norton SystemWorks window, go to the General tab.

To use the Information Wizard

1. In the Norton SystemWorks Professional Edition Information Wizard welcome window, click **Next**.
   If you purchased your computer with Norton SystemWorks Professional Edition already installed, you must accept the license agreement in order to use Norton SystemWorks Professional Edition.
2. In the License Agreement dialog box, click **I accept the license agreement**, then click **Next**.
3. In the first Registration window, select the country from which you are registering and the country in which you live (if different), then click **Next**.
4. If you would like information from Symantec about Norton SystemWorks Professional Edition, select the method by which you want to receive that information, then click **Next**.
5. Type your name and select whether you want Norton SystemWorks Professional Edition registered to you or your company, then click **Next**.

6 Type your address, then click **Next**.

7 In response to the Symantec survey questions, do one of the following:

- Answer the survey questions to help Symantec improve its products and services, then click **Next**.
- Skip the survey by clicking **Next**.

8 Select whether you want to register Norton SystemWorks Professional Edition through the Internet or by mail.

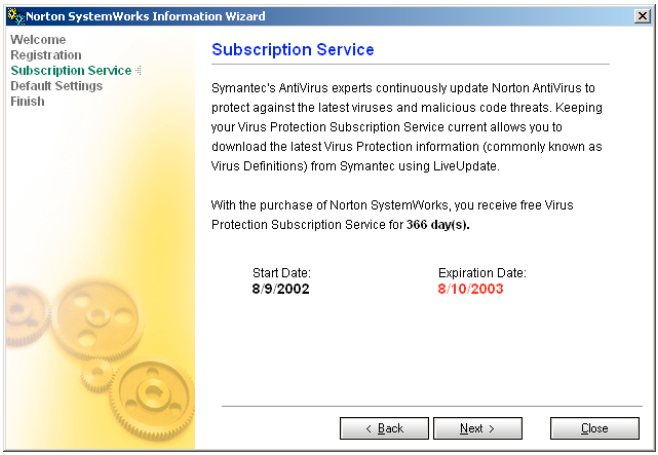
- If you want to register through the Internet, you must have a connection to the Internet.
- If you want to register by mail, you must connect to a printer that the Information Wizard can use to print the registration form.

9 Click **Next**.
If you submitted your registration through the Internet, the Information Wizard displays the serial number for your product.

10 Write down the serial number for future reference or click **Print** to print a copy of your registration information, then click **Next**.

11 Select whether you want to use your existing profile the next time that you register a Symantec product, or type the information as part of registration, then click **Finish**.
If Norton AntiVirus was included in the installation, the Subscription Service information appears.

12 Review the Subscription Service information, then click **Next**.


Norton SystemWorks Information Wizard
Welcome
Registration
Subscription Service
Default Settings
Finish
Subscription Service
Symantec's AntiVirus experts continuously update Norton AntiVirus to protect against the latest viruses and malicious code threats. Keeping your Virus Protection Subscription Service current allows you to download the latest Virus Protection information (commonly known as Virus Definitions) from Symantec using LiveUpdate.
With the purchase of Norton SystemWorks, you receive free Virus Protection Subscription Service for 366 day(s).
Start Date:
8/9/2002
Expiration Date:
8/10/2003
< Back
Next >
Close

13 Review the post-install tasks that Norton SystemWorks Professional Edition will perform.

One Button Checkup	Performs a checkup of your computer once a week.
Norton AntiVirus	Updates your virus protection whenever you are connected to the Internet and performs a weekly scan of your hard disks. Norton AntiVirus Auto-Protect protects you from viruses while you work.
Norton Protected Recycle Bin	Provides extra recovery capability for deleted and overwritten files.

14 Click **Next**.

See "Read the Readme file" on page 50.

15 If you want to review the Readme file, click **View Readme**.
You can also read the Readme file after installing.

16 In the Norton SystemWorks Install Summary window, review your installed settings, then click **Finish**.

Read the Readme file

If you did not read the Readme file using the Information Wizard, you can access it on your hard disk. The Readme file contains technical tips and late-breaking information. It is installed on your hard disk in the same location as the Norton SystemWorks Professional Edition product files.

To read the Readme file

1 Using Windows Explorer, navigate to the location where Norton SystemWorks Professional Edition files are installed.
If you installed Norton SystemWorks Professional Edition to the default location, the files are in this path on your hard disk:
C:\Program Files\Norton SystemWorks

2 Double-click **Readme.txt** to open the file in Notepad, WordPad, or another word processing program.

3 Close the word processing program when you have finished reading the file.

Install other products from the CD

The Norton SystemWorks Professional Edition CD includes separate installers for GoBack 3 Personal Edition and PerformanceTest. After installing Norton SystemWorks, restart the CD and run the individual installers. See "Install GoBack 3 Personal Edition" on page 107.

Install PerformanceTest

You can install PerformanceTest from the Norton SystemWorks Professional Edition CD.

To install PerformanceTest

1. In the Norton SystemWorks Professional Edition CD window, click **Install PerformanceTest**.
2. Click **Yes** to confirm that you want to install.
3. In the Setup-PerformanceTest wizard, click **Next**.
4. Click **Yes** to accept all the terms of the License Agreement.
   If you click No, the installation is cancelled.
5. Do one of the following:
   - To confirm the default destination folder location, click **Next**.
   - To select a different destination folder, click **Browse**, then select any directory whose name does not contain an apostrophe.
6. Confirm the name of the Start Menu folder, then click **Next**.
7. In the Ready to Install window, review the installation settings and click **Install**.
   When installation is finished, you can view the Readme file and launch PerformanceTest.
8. If you do not want to start PerformanceTest or read the Readme file immediately, uncheck the check boxes next to these options.
9. Click **Finish**.

PerformanceTest places an *icon* on your Windows desktop and on the Windows Start menu.

Start PerformanceTest

More information about PerformanceTest is available in its online Help system.

To start PerformanceTest

❖ Do one of the following:

- On the Windows desktop, double-click the **PerformanceTest** program icon.
- On the Windows taskbar, click **Start** > **Programs** > **PerformanceTest** > **PerformanceTest**.

To access PerformanceTest Help

1. Start PerformanceTest.
2. On the PerformanceTest Help menu, click **Help**.

If you need to uninstall Norton SystemWorks Professional Edition

If you need to remove Norton SystemWorks Professional Edition from your computer, use the Add/Remove Programs utility in the Windows Control Panel.

During uninstall, Windows may indicate that it is installing software. You can disregard this standard Microsoft installation message.

To uninstall Norton SystemWorks Professional Edition

1. Do one of the following:
   - On the Windows taskbar, click **Start** > **Settings** > **Control Panel** **Add/Remove Programs**.
   - On the Windows XP taskbar, click **Start** > **Control Panel** > **Add or Remove Programs**.
2. In the list of currently installed programs, click **Norton SystemWorks**, then click **Change**.
3. In the Norton SystemWorks Installation dialog box, do one of the following:
   - To remove components of Norton SystemWorks Professional Edition, click **Modify**.
   - To completely remove Norton SystemWorks Professional Edition, click **Remove**.

See "Select features to install" on page 46.

4 Do one of the following:

- If you are removing a component, select the component to remove, then click **Next**.
- If you are completely removing Norton SystemWorks Professional Edition, review the summary of what is being removed, then click **Next**.

When the components have been removed, a summary appears.

5 Click **Finish**.
A dialog box prompts you to restart in order for your changes to take effect.

6 Click **Yes** to restart your computer.

If you have no other Symantec products on your computer, you should also uninstall LiveReg and LiveUpdate.

To uninstall LiveReg and LiveUpdate

1 Do one of the following:

- On the Windows taskbar, click **Start** > **Settings** > **Control Panel** **Add/Remove Programs**.
- On the Windows XP taskbar, click **Start** > **Control Panel** > **Add or Remove Programs**.

2 In the list of currently installed programs, click **LiveReg**.

3 Do one of the following:

- In Windows 2000/Me, click **Change/Remove**.
- In Windows XP, click **Change**.
- In Windows 98, click **Add/Remove**.

4 Click **Yes** to confirm that you want to uninstall the product.

5 To uninstall LiveUpdate, repeat steps 1 through 4, selecting LiveUpdate in step 2.

Norton SystemWorks basics

4

Norton SystemWorks basics include general information about how to work with Norton SystemWorks Professional Edition, keep your computer protected, customize Norton SystemWorks Professional Edition, monitor Norton AntiVirus and other tools' activities, and access more information.

If you have both Norton SystemWorks Professional Edition and Norton Internet Security installed on your computer, when you install Norton Internet Security, you can choose to include a Norton Internet Security button in the Norton SystemWorks Professional Edition main window.

Access Norton SystemWorks tools

Norton SystemWorks tools include One Button Checkup, Web Tools, Norton AntiVirus tools, Norton Utilities tools, Norton CleanSweep tools, GoBack 3 Personal Edition, and Extra Features.

The Norton SystemWorks Professional Edition main window lets you access its main features, online Help, and options. Some features are available without opening the main window.

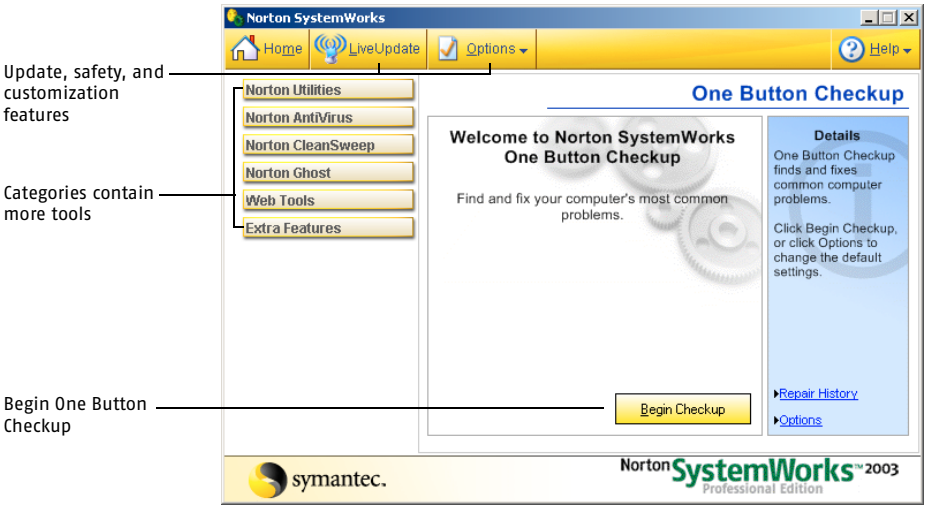
Use the Norton SystemWorks Professional Edition main window

From the Norton SystemWorks Professional Edition main window you can access its main tools, set options, run LiveUpdate, and perform other activities.

To start Norton SystemWorks Professional Edition

1 Do one of the following:

- On the Windows taskbar, click **Start** > **Programs** > **Norton SystemWorks** > **Norton SystemWorks**.
- On the Windows XP taskbar, click **Start** > **All Programs** > **Norton SystemWorks** > **Norton SystemWorks**.



2 In the left pane of the Norton SystemWorks Professional Edition main window, click a category, such as Norton Utilities or Web Tools, to see a description or an expanded list of tools in the right pane.

3 At the top of the Norton SystemWorks Professional Edition main window, click one of the buttons for features that apply to more than one area of the program.
Your options are:

Home	Return to the Norton SystemWorks Professional Edition main window after running another tool, such as Norton Disk Doctor or Norton AntiVirus.
LiveUpdate	Start LiveUpdate, where you can update virus definitions, Norton SystemWorks Professional Edition programs, and any other installed Symantec products. See "Keeping current with LiveUpdate" on page 113.

Rescue (Windows 98/Me only)	Create a set of floppy disks to use in an emergency, such as when your computer won't start or if you think your computer is infected with a virus. See "Create and use Rescue Disks" on page 70.
Options	Customize general features of Norton SystemWorks Professional Edition. See "Customize Norton SystemWorks Professional Edition" on page 75.
Help	Access Help for Norton SystemWorks Professional Edition and other installed tools. See "Use online Help" on page 94.

Use Norton Tray Manager

See "Customize Norton SystemWorks Professional Edition" on page 75.

Norton Tray Manager displays a Windows tray *icon* in the system tray at the end of the Windows 98/2000/Me taskbar. Use Norton Tray Manager as a shortcut to open tools such as Norton AntiVirus and to enable or disable memory-resident programs such as Norton AntiVirus Auto-Protect, Connection Keep Alive, and Smart Sweep/Internet Sweep.

To use Norton Tray Manager

1. On the Windows desktop, move the mouse pointer over the Norton Tray Manager icon.
   Available program icons pop up from the Windows system tray area.
2. Right-click an icon.
3. On the program's shortcut menu, click the option that you want.

Temporarily disable Auto-Protect

See "Customize Norton AntiVirus" on page 81.

If you have not changed the default option settings, Auto-Protect loads when you start your computer to guard against viruses. It checks programs for viruses as they are run and monitors your computer for any activity that might indicate the presence of a virus. When a virus or *virus-like activity* is detected, Auto-Protect alerts you.

In some cases, Auto-Protect may warn you about a virus-like activity that you know is not the work of a virus. If you will be performing such an activity and want to avoid the warning, you can temporarily disable Auto-Protect.

If you have set a *password* for Norton AntiVirus Options, Norton AntiVirus asks you for the password before you can view or adjust the settings.

To temporarily disable Auto-Protect

See "Access Norton SystemWorks tools" on page 55.

1. Start Norton SystemWorks Professional Edition.
2. In the Norton SystemWorks Professional Edition main window, click **Options** > **Norton AntiVirus**.
3. In the Options window, under System, click **Auto-Protect**.
4. In the Auto-Protect pane, uncheck **Enable Auto-Protect**.

Be sure to enable Auto-Protect when you have completed your task to ensure that your computer remains protected.

To enable Auto-Protect

See "Access Norton SystemWorks tools" on page 55.

1. Start Norton SystemWorks Professional Edition.
2. In the Norton SystemWorks Professional Edition main window, click **Options** > **Norton AntiVirus**.
3. In the Options window, under System, click **Auto-Protect**.
4. In the Auto-Protect pane, check **Enable Auto-Protect**.

If the Norton AntiVirus icon appears in the Windows system tray, you can use it to enable and disable Auto-Protect.

To enable or disable Auto-Protect using the tray icon

1. Right-click the Norton AntiVirus Windows tray icon.
2. Do one of the following:
   - If Auto-Protect is disabled, click **Enable Auto-Protect**.
   - If Auto-Protect is enabled, click **Disable Auto-Protect**.

Disable or enable Smart Sweep/Internet Sweep

When you install Norton SystemWorks Professional Edition, the Norton CleanSweep tools, Smart Sweep and Internet Sweep, load with Windows and monitor your computer for installations and Internet downloads that you might want to delete later. You can enable and disable them in the Norton CleanSweep Options dialog box, or temporarily disable them from the Norton Tray Manager.

To enable or disable Smart Sweep/Internet Sweep

1. Start Norton SystemWorks Professional Edition.
2. In the Norton SystemWorks Professional Edition main window, click **Options** > **Norton CleanSweep**.

3 In the Norton CleanSweep Options dialog box, click **Smart Sweep/ Internet Sweep**.
On the Smart Sweep/Internet Sweep tab, a message displays the Smart Sweep/Internet Sweep status as active or not active.

4 Do one of the following:
- Click **Turn Smart Sweep/Internet Sweep on**.
- Click **Turn Smart Sweep/Internet Sweep off**.

5 Click **OK**.

To disable Smart Sweep/Internet Sweep using the tray icon

1 On the Windows desktop, move the mouse pointer over the Norton Tray Manager Windows tray icon.

2 Do one of the following:
- Right-click the Smart Sweep icon, then click **Close**.
- Right-click the Internet Sweep icon, then click **Close**.

3 In response to the confirmation message, click **Yes**.

Use the Windows Explorer toolbar

Norton SystemWorks Professional Edition adds a Norton AntiVirus button and menu to the Windows Explorer toolbar. The button drops down an abbreviated Norton AntiVirus menu. Click the arrow to the right of the button and the following options appear:

View Status	Launches Norton SystemWorks, displaying the Norton AntiVirus Status window with system status.
View Quarantine	Displays the Norton AntiVirus Quarantine area and the files currently stored there.
View Activity Log	Displays the Norton AntiVirus Log Viewer, showing you various Norton AntiVirus activities such as scans performed and problems found.
View Virus Encyclopedia	Connects you to the Symantec Security Response Web page, from which you can search for information on all types of viruses.
Scan for Viruses	Opens Norton SystemWorks in the Norton AntiVirus Scan for Viruses pane, in which you can specify a scan to run.

When you first open Windows Explorer after installing Norton SystemWorks Professional Edition, you may not see the Norton AntiVirus button and menu. You might have to restart Windows before the toolbar button appears.

To display the Norton AntiVirus toolbar menu in Windows Explorer

- On the View menu, click **Toolbars** > **Norton AntiVirus**.

Your computer's configuration might prevent you from accessing the Norton AntiVirus Windows Explorer menu.

Check the version numbers

You can check the version numbers of Norton SystemWorks Professional Edition and its components.

To check the version numbers

See "Access Norton SystemWorks tools" on page 55.

1. Start Norton SystemWorks Professional Edition.
2. In the Norton SystemWorks Professional Edition main window, click **Help** > **About Norton SystemWorks**.
3. Click **Norton SystemWorks**.
   In the dialog box, the version numbers of Norton SystemWorks Professional Edition components appear.
4. When you have finished viewing the version numbers, click **OK**.

Use the Windows desktop shortcut menu

You can access some Norton SystemWorks Professional Edition tools from the Windows desktop shortcut menu. The Norton SystemWorks Professional Edition tools that appear on the shortcut menu depend on the kind of item that you select and the features of Norton SystemWorks Professional Edition that you have installed.

To use the Windows desktop shortcut menu

1 On your Windows desktop, open **Windows Explorer**.

2 In Windows Explorer, right-click a disk, folder, or file icon, then select an option. Your options are:

Scan with Norton AntiVirus	Scans your hard disk for viruses. See "Manually scan disks, folders, and files" on page 124.
System Info Windows 98/Me only	Opens the Norton Utilities System Information window. See "Use System Information" on page 144.
Send To > Wipe Info	Permanently deletes the selected item. See "Eliminating data permanently" on page 183.
Send To > Wipe Info-Slack Space only Windows 98/Me only	Wipes the empty "slack" space formerly occupied by the selected item. See "Wipe files or folders" on page 186.
Send To > Wipe Info-Wipe Free space Windows 98/Me only	Wipes the empty space related to the selected item. See "To wipe files or folders in Windows 98/Me" on page 187.

Disable or enable Norton System Doctor

If you want to perform tasks on your computer that require that no other applications are running, you can prevent Norton System Doctor from starting with Windows.

To disable or enable Norton System Doctor

See "Access Norton SystemWorks tools" on page 55.

1 Start Norton SystemWorks Professional Edition.

2 In the Norton SystemWorks Professional Edition main window, click **Options** > **Norton Utilities**.

3 In the Norton Utilities Options dialog box, click **Startup Programs**.

4 On the Startup Programs tab, check or uncheck **Norton System Doctor**.

5 Click **OK**.

Start utilities from the CD

In some situations, running utilities from the CD lets you perform more comprehensive activities on your hard disk. You can run utilities from the CD when you think that you have a virus or want to repair a damaged file and not increase the damage by running programs from your hard disk. You can launch Norton Disk Doctor, Norton WinDoctor, Wipe Info, and Fast & Safe Cleanup from the CD. In Windows 98, you can also launch UnErase Wizard.

To start utilities from the CD

1. Insert the Norton SystemWorks Professional Edition CD into the CD-ROM drive.
2. In the Norton SystemWorks Professional Edition CD window, click **Launch Utilities from CD**.
3. In the Norton SystemWorks Professional Edition CD Utilities window, click a utility. Your choices are:

Norton Disk Doctor	See "Finding and fixing problems" on page 143.
Norton WinDoctor	See "Find and fix Windows problems" on page 154.
Wipe Info	See "Eliminating data permanently" on page 183.
UnErase Wizard (Windows 98/Me)	See "Recovering missing or erased files" on page 161.
Fast & Safe Cleanup	See "Removing unwanted files and programs" on page 191.

4. Run the utility.
   For more information, refer to the instructions for the utility that you want to run.
5. When you have finished running the utility, close it.
6. In the Norton SystemWorks Professional Edition CD Utilities window, click **Exit**.
7. Close the Norton SystemWorks Professional Edition CD window.

Work with Norton SystemWorks Professional Edition

This section contains the basics of how to use Norton SystemWorks Professional Edition.

Perform a One Button Checkup

One Button Checkup scans your computer with a collection of diagnostic tools that cover the most critical computer activities, such as virus protection and disk integrity.

You can run One Button Checkup whenever you think that you may have a problem, and to ensure that your computer is performing to its optimum capability. You can customize One Button Checkup to specify which scans should run, and schedule automatic checkups. You can also view a history of repairs that were made by One Button Checkup, and undo a repair if necessary.

One Button Checkup includes selected tools from Norton Utilities and Norton AntiVirus.

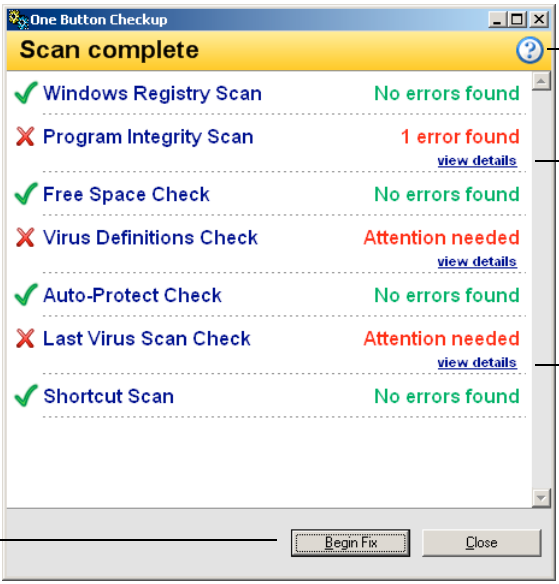
Norton SystemWorks components	One Button Checkup tools
Norton Utilities	WinDoctor: Registry Scan, Program Integrity Scan, and Shortcut Scan System Information: Free Space Check Norton Optimization Wizard: Registry Integrity Scan (Windows 98/Me only) Speed Disk: Disk Fragmentation Scan Norton Disk Doctor: Hard Disk Integrity Scan
Norton AntiVirus	Virus Definitions Check Auto-Protect Check Last Virus Scan Check

To perform a One Button Checkup

See "Access Norton SystemWorks tools" on page 55.

1. Start Norton SystemWorks Professional Edition.
2. In the Norton SystemWorks Professional Edition main window, click **Begin Checkup**.
   One Button Checkup starts to run its diagnostic scans.

3 If you need to interrupt the checkup, click **Stop Scan**.
When the scans are complete, One Button Checkup displays a summary of scan results that are grouped by scan category.



4 Select the action that you want to take. Your options are:

View error details before One Button Checkup repairs them.	See "To view details in One Button Checkup" on page 65.
Exclude an error from repair.	See "To ignore problems found by One Button Checkup" on page 65.

5 To let One Button Checkup proceed with repairs, click **Begin Fix**.
If One Button Checkup can't fix a problem, it prompts you to use another program to fix the problem manually.

6 After you have repaired problems with One Button Checkup, click **Rescan** to ensure that all the problems are fixed.

7 When repairs are complete, in the One Button Checkup scan summary dialog box, click **Close**.

If you do not want to have all problems repaired automatically, you can view their details and select which problems to fix.

To view details in One Button Checkup

See "Perform a One Button Checkup" on page 63.

1. Perform a One Button Checkup.
2. In the Scan Complete dialog box, next to the scan that you want to view, click **view details**.
   A more detailed description of the problem appears below the scan name.
3. Double-click the problem description to view a description of the file name and more details.
4. In the Problem Detail dialog box, review the problem description.

Ignore problems found by One Button Checkup

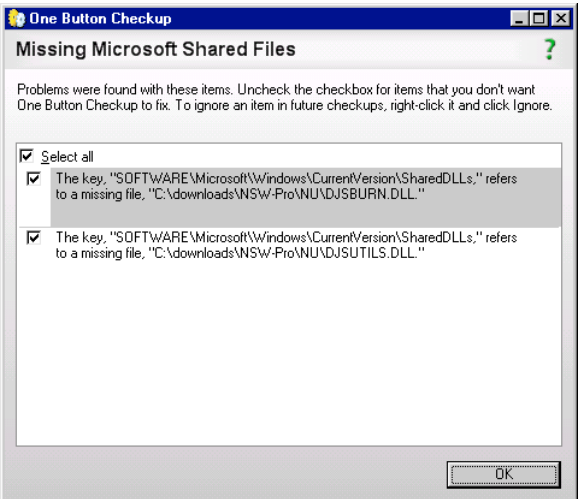
You can have One Button Checkup ignore selected problems on future scans. The problem is added to an Ignore Problems list. You can also remove a problem from the Ignored Problems list.

To ignore problems found by One Button Checkup

See "Perform a One Button Checkup" on page 63.

1. Perform a One Button Checkup.
2. In the Scan Complete dialog box, next to a reported error, click **view details**.
3. Do one of the following:
   - If you don't want One Button Checkup to fix the selected error, uncheck it.

- If One Button Checkup should always ignore this problem, right-click the item, then click **Ignore Selected Problem**.


One Button Checkup
Missing Microsoft Shared Files
Problems were found with these items. Uncheck the checkbox for items that you don't want One Button Checkup to fix. To ignore an item in future checkups, right-click it and click Ignore.
Select all
The key, "SOFTWARE\Microsoft\Windows\CurrentVersion\SharedDLLs," refers to a missing file, "C:\downloads\NSW-Pro\NU\DJSBURN.DLL."
The key, "SOFTWARE\Microsoft\Windows\CurrentVersion\SharedDLLs," refers to a missing file, "C:\downloads\NSW-Pro\NU\DJSUTILS.DLL."
OK

Manage previous One Button Checkup repairs

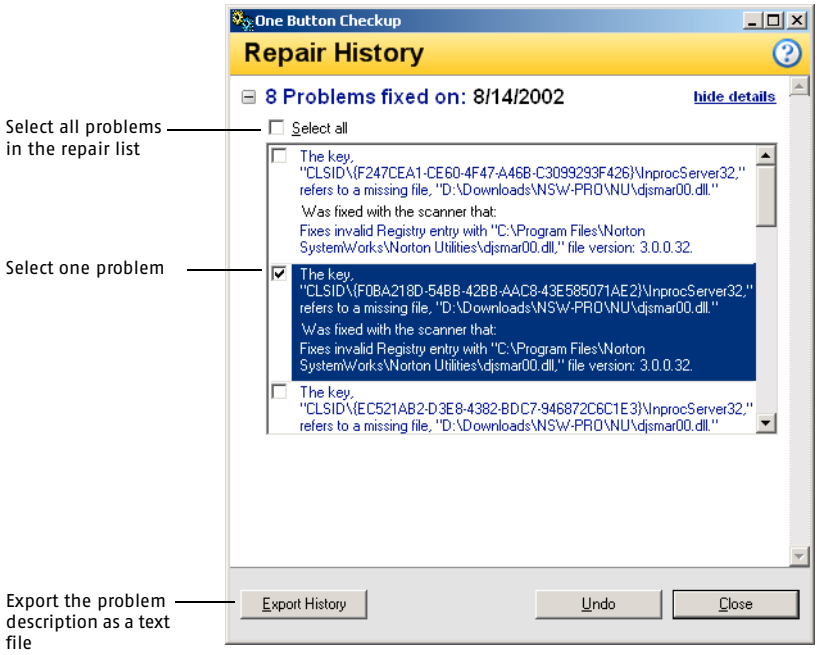
You can view previous One Button Checkup repairs and undo repairs, if necessary. You might undo a repair if, for example, One Button Checkup deleted an expected shortcut file and you want to restore it. Repairs performed in a One Button Checkup are grouped chronologically by session.

To view the One Button Checkup Repair History or to undo repairs

See "Perform a One Button Checkup" on page 63.

1. Perform a One Button Checkup.
2. In the One Button Checkup Details pane, click **Repair History**.

3 In the Repair History window, click **View Details**.


Select all problems in the repair list
Select one problem
Export the problem description as a text file
One Button Checkup
Repair History
8 Problems fixed on: 8/14/2002
hide details
Select all
The key, "CLSID\{F247CEA1-CE60-4F47-A46B-C3099293F426}\InprocServer32," refers to a missing file, "D:\Downloads\NSW-PRO\NU\djsmar00.dll."
Was fixed with the scanner that:
Fixes invalid Registry entry with "C:\Program Files\Norton SystemWorks\Norton Utilities\djsmar00.dll," file version: 3.0.0.32.
The key, "CLSID\{F0BA218D-54BB-42BB-AAC8-43E585071AE2}\InprocServer32," refers to a missing file, "D:\Downloads\NSW-PRO\NU\djsmar00.dll."
Was fixed with the scanner that:
Fixes invalid Registry entry with "C:\Program Files\Norton SystemWorks\Norton Utilities\djsmar00.dll," file version: 3.0.0.32.
The key, "CLSID\{EC521AB2-D3E8-4382-BDC7-946872C6C1E3}\InprocServer32," refers to a missing file, "D:\Downloads\NSW-PRO\NU\djsmar00.dll."
Export History
Undo
Close

4 Do one of the following:

- Check one or more repair desctiptions.
- Check **Select All** to select all repairs in a single One Button Checkup session.

5 Do one of the following:

- Click **Undo** to undo a selected repair.
  One Button Checkup restores the problem condition to the state that it was in before the repair. You might have to restart your computer for some reversed repairs to take effect.
- Click **Export History** to export a text description of a selected repair or group of repairs. You will be prompted to specify a name for the exported text file.

6 Click **Close**.

Set One Button Checkup Repair History options

You can specify how long to retain a record of One Button Checkup repairs in One Button Checkup Advanced Options.

To set One Button Checkup Repair History options

See "Access Norton SystemWorks tools" on page 55.

1. Start Norton SystemWorks Professional Edition.
2. In the One Button Checkup Details pane, click **Options**.
3. Click **Advanced Options**.
4. On the Repair History tab, indicate the duration for the repair history. Your options are:

Days	Type the number of days.
Number of repairs	Type the number of repairs before One Button Checkup deletes the history.
Forever	Click Forever if you want to keep a record of all repairs.

5. To view the history of a previous One Button Checkup repair, click **View History**. See "Manage previous One Button Checkup repairs" on page 66.
6. When you've made your selections, click **OK**.

Schedule One Button Checkup scans

Norton SystemWorks Professional Edition lets you schedule a One Button Checkup to run at a specified time. The default time is every Friday at 5:30 P.M. If One Button Checkup finds any errors, it prompts you to fix them. You can set One Button Checkup options to repair any problems automatically.

In Windows 2000/XP, you must have *Administrator access rights* to schedule a One Button Checkup.

To schedule a One Button Checkup

1. Start Norton SystemWorks Professional Edition.
2. In the Norton SystemWorks Professional Edition main window, click **Options** > **Norton SystemWorks**.
3. In the Norton SystemWorks Options dialog box, on the One Button Checkup tab, click **Advanced Options**.

4 In the One Button Checkup Advanced Options dialog box, click the **Scheduling** tab.

5 Check **Run One Button Checkup at the scheduled time**.

6 If you want One Button Checkup to repair any problems automatically, check **Auto repair during scheduled One Button Checkup scans**. If this is not checked, One Button Checkup will prompt you to begin repairs.

7 To set a different time or add a new time, click **Change**.

8 In the Schedule dialog box, select a frequency and start time. Your options are:

Daily	Specify the number of days between checkups.
Weekly	Specify a weekly interval and a day of the week.
Monthly	Specify the months in which you want to scan and the day of the month.
Once	Specify any day of the year.
At system startup	Run One Button Checkup every time that you start Windows.
At logon	Run One Button Checkup every time that you log on to Windows.
When idle	Run One Button Checkup after the computer has been idle for the specified number of minutes.

See "About One Button Checkup Advanced options" on page 78.

9 To configure several schedules for One Button Checkup, check **Show Multiple Schedules**.
To specify start and end dates for the scheduled scans, you can set more options. You can also have the activity repeat on an hourly or daily basis.

10 If you want One Button Checkup to run more than once a day, check **Repeat** and choose the frequency and, optionally, an end time for the task.

11 Click **OK** to close the Advanced Schedule Options dialog box.

12 Click **OK** to close the Norton SystemWorks Options dialog box.

If you choose to ignore any errors while using Norton WinDoctor, One Button Checkup may still report these errors during its scan and suggest that you run Norton WinDoctor again. One Button Checkup and Norton

WinDoctor do not share the same settings, so you will have to fix these errors using Norton WinDoctor to stop this message from displaying.

Access Extra Features

Norton SystemWorks Professional Edition Extra Features include additional software and Internet-based services to enhance your computing security and productivity. These include Symantec Web features, Tech24.com and Symantec Security Check, and other programs. You can access Extra Features from the Norton SystemWorks Professional Edition main window. To access some features, you must have an active Internet connection.

To access Symantec Web in Extra Features

1. Do one of the following:
   - On the Windows taskbar, click **Start** > **Programs** > **Norton SystemWorks** > **Norton SystemWorks**.
   - On the Windows XP taskbar, click **Start** > **All Programs** > **Norton SystemWorks** > **Norton SystemWorks**.
2. In the Norton SystemWorks Professional Edition main window, click **Extra Features**.
3. Click **Symantec Web**.
4. On the Symantec Web page, click a Web-based feature.
   A message warns that you will be connected to an external Web site that is not part of Symantec.
5. Read the warning, then click **Yes**.
   If you click No, the action is cancelled.

Create and use Rescue Disks

Norton SystemWorks Professional Edition lets you create images on floppy disks that let you restart your computer when your hard disk is damaged or infected with a virus.

DOS-based utilities do not work with NTFS formatted disks.

If you need to recover disks or files with Rescue Disk, see the following emergency procedures.

Procedure	For more information
Using the Norton SystemWorks Professional Edition CD, create Emergency Disks to restart your computer and repair damage.	See "Create Emergency Disks" on page 28.
In Windows 98/Me, prepare for future emergencies by creating and maintaining Rescue Disks that can be used to restart your computer and restore startup files and partition information.	See "Create a Rescue Disk set" on page 72.

About Rescue Disks

Rescue Disks record a duplicate set of system startup files and disk partition information, and store rescue utilities, configuration files, and a DOS-based Norton AntiVirus scanner across multiple floppy disks or on a *network* drive. Rescue Disks can be made for the Windows 98/Me operating systems, but do not support NTFS formatted disks.

A Rescue Disk set consists of one *bootable* floppy disk, one Norton AntiVirus Program floppy disk, and three Virus Definition floppy disks. If you have Norton Utilities installed, you will also have two Norton Utilities floppy disks in your Rescue Disk set. With a Rescue Disk set, you can start your computer in DOS mode and use Norton AntiVirus to fix virus-related problems.

Rescue Disks contain information specific to the computer on which they were made.

If you are using Rescue Disks for recovery, you must use the disks made for your computer. See "Recover an unbootable hard disk with Rescue Disks" on page 249.

If you are using Rescue Disks to scan for viruses, you can use disks made for a different computer. See "If you need to use Rescue Disks (Windows 98/98SE/Me)" on page 138.

You should update Rescue Disks whenever you update your virus protection, install new software, or make changes to your hardware.

Create a Rescue Disk set

You can create Rescue Disks any time. You can start the Rescue Disk Wizard from the Norton SystemWorks Professional Edition main window.

See "Temporarily disable Auto-Protect" on page 57.

If you start the Rescue Disk Wizard from the Norton SystemWorks Professional Edition main window, temporarily disable Auto-Protect while you are creating the Rescue Disk set. If you do not restart your computer after creating Rescue Disks, remember to enable Auto-Protect again.

When you select a floppy disk drive, the Rescue Disk *program* calculates the number of disks that you will need to complete the set. Depending on what items you want to include in the Rescue Disk set, you might need ten or more floppy disks.

If you choose to create Rescue Disks on a network drive, a second physical hard disk, or some other large capacity disk drive (but not a CD), your Rescue Disk set is placed in a folder on the selected disk. Make sure that you also have a bootable floppy disk in a safe location. This disk should contain the network *drivers* or other files necessary to start your computer and access the drive on which you placed your Rescue Disk set. Creating a Rescue Disk set on a startup hard disk, for example, drive C, is not recommended because you will not be able to access their rescue programs and configuration files if your hard disk is damaged and unable to start.

To create Rescue Disks

See "Access Norton SystemWorks tools" on page 55.

1. Start Norton SystemWorks Professional Edition.
2. In the Norton SystemWorks Professional Edition main window, click **Rescue**.
3. In the Rescue Disk window, select the drive on which to create the Rescue Disk set.
   To create a Rescue Disk set on floppy disks, select drive A.
   When you select a floppy disk drive, the Basic Rescue program displays the number of floppy disks that you will need to create the Rescue Disk set.
4. To make changes to the default Rescue Disk settings, click **Options** and do the following:
   - On the Rescue Files tab, specify the files to include in the Rescue Disk set. If you change the default file selection, the number of required floppy disks will also change.
   - On the Format Settings tab, select the type of format, if any, that you want Rescue Disk to use when it prepares the bootable floppy disk for the Rescue Disk set.

5 Click **OK** to return to the Rescue Disk dialog box.

6 When you have either assembled the required number of floppy disks or identified another location for the Rescue Disk files, click **Create**.
If you selected a floppy disk drive, Rescue Disk displays a Basic Rescue Disk List and an estimate of how much time you will need to create the entire set.

7 Label the disks as specified in the Basic Rescue Disk List window, then click **OK**.
Rescue Disk prompts you to insert the first disk in the floppy disk drive. If you selected a network drive or other larger-format drive, Rescue Disk prompts you for a Rescue Folder drive location.

8 Insert the disks as requested.

9 When you have finished creating the basic Rescue Disk set, in the Rescue Disk dialog box, click **Close**.

Test your Rescue Disks

After you have created the Rescue Disk set, you are prompted to test your disks. This requires that you restart your computer using the Rescue Disks.

If you created Rescue Disks on a network drive, a second physical hard disk, or some other large capacity disk drive, you will have to restart into DOS from an external floppy disk, navigate to the Rescue folder, and run Rescue.exe. See "My Rescue Boot Disk does not work" on page 227.

To test your Rescue Disks

1 Close all open Windows programs.

2 Insert the disk labeled Basic Rescue Boot Floppy Disk into drive A, then click **Restart**.
If the Rescue Disk screen appears on your monitor, the Rescue Disk works properly.
If the Rescue Disk screen does not appear, you have several options for correcting the problem.

3 Press **Escape** to exit to DOS.

4 Remove the disk from drive A and slide open the plastic tab on the back of the disk to write-protect it.

5 Restart your computer.

Update your Rescue Disks

You can update your Rescue Disks as often as you like. Rescue Disk lets you update your basic Rescue Disk set without having to recreate them.

If you are updating a floppy disk set, make sure that your disks are not write-protected before you begin.

To update your Rescue Disks

See "Access Norton SystemWorks tools" on page 55.

1. Start Norton SystemWorks Professional Edition.
2. In the Norton SystemWorks Professional Edition main window, click **Rescue**.
3. In the Rescue Disk dialog box, under Select Destination Drive, select **drive A**, then click **Update**.
   A message prompts you to insert the disk labeled Basic Rescue Boot Floppy Disk into drive A.
4. Insert the Basic Rescue Boot Floppy Disk into drive A, then click **OK**.
5. Insert the remaining disks in your set as requested.

See "Test your Rescue Disks" on page 73.

Make sure to test your newly updated Rescue Disk set when prompted.

Rescue Disk Options

Rescue Disk has the following options.

Add Files	Click to specify additional files that you want Rescue Disk to store on the Rescue Disk set. Do not use this as a backup utility. Add files only if they are needed to restore your system after a crash.
Remove File	Click to remove the selected file under User-selected Files. The files will no longer be included on the Rescue Disk set.
Rescue items list	The list is categorized and presented in a hierarchical view, similar to a Windows Explorer view. Click the plus sign next to a category to expand the list and see what the category contains. Click the plus sign next to a specific file for more information about the file. The list of rescue items is different depending on the programs you have installed and the type of Rescue Disk set you are using.
Basic Rescue Boot Floppy Files	Files that Rescue Disk stores on the floppy disk that you use to start your system.

Rescue DOS Utility Programs	DOS-based emergency programs that Rescue Disk stores on the Rescue Disk set. You can use these DOS-based utilities to recover your system.
Norton AntiVirus Program	Norton AntiVirus program files.
Definitions Disks	Virus definitions files used by Norton AntiVirus to scan your system in an emergency. There are several of these disks.
User-selected Files	Files you have added to the Rescue Disk set. Add files to this list by clicking Add Files. Remove files from this list by clicking the file, then clicking Remove.

Customize Norton SystemWorks Professional Edition

The default settings for Norton SystemWorks Professional Edition provide a safe, automatic, and efficient way of protecting your computer and maintaining its performance. On the Options menu in the Norton SystemWorks Professional Edition main window, you can access options for Web Tools, One Button Checkup, Norton AntiVirus, Norton Utilities, and Norton CleanSweep.

Set Norton SystemWorks Professional Edition options

You change Norton SystemWorks Professional Edition general settings through the Norton SystemWorks Options dialog box.

To set Norton SystemWorks Professional Edition options

See "Access Norton SystemWorks tools" on page 55.

1. Start Norton SystemWorks Professional Edition.
2. In the Norton SystemWorks Professional Edition main window, click **Options** > **Norton SystemWorks**.
3. In the Norton SystemWorks Options dialog box, click a tab.
4. On the selected tab, set the options that you want.
   Your options are:

Startup	See "About Startup options" on page 76.
General	See "About General options" on page 76.

One Button Checkup	See "About One Button Checkup options" on page 77.
One Button Checkup Advanced Options	See "About One Button Checkup Advanced options" on page 78.

About Startup options

Norton SystemWorks Startup options let you select which programs start when you launch Windows. When checked, the following selected Norton SystemWorks programs start with Windows:

Program	What it does on startup
Norton AntiVirus Auto-Protect	Remains in memory and monitors your computer for any signs of virus threats.
Fast & Safe Cleanup	Cleans temporary files from your hard disks.
Smart Sweep/Internet Sweep	Automatically monitors program installations, including programs that are downloaded from the Internet.
Norton Disk Doctor	Examines your hard disks for errors.
Norton System Doctor	Remains in memory and monitors your computer for selected conditions.

About General options

General options let you specify whether splash screens and program introductions should appear when Norton SystemWorks programs start and whether you receive critical updates.

Display program splash screens	Displays the graphic window for each program when that program is started. Uncheck this check box to bypass the graphic and open the program's main window.
Display program introduction dialogs	Displays a brief description of the program every time you start the program.
Norton Tray Manager Windows 98/Me/2000	Collects the taskbar icons for memory resident Norton SystemWorks programs into one icon.
Disable Critical Update Notification and system-wide Automatic LiveUpdate	Disables Automatic LiveUpdate and prevents LiveUpdate from notifying you if critical program updates are available.

About One Button Checkup options

Before running One Button Checkup, you can select which scans are included in the checkup. For example, if you have already scheduled a regular Norton AntiVirus scan, you could disable it in One Button Checkup options.

Windows Registry Scan	Checks for inaccurate and obsolete entries in the Windows registry that could cause errors.
Program Integrity Scan	Ensures that a program's associated files are in their expected locations, and helps you locate them if they are missing.
Free Space Check	Checks the amount of free space on local or network hard disks.
Virus Definitions Check	Checks that your virus definitions are up to date so that you are protected against the latest virus threats.
Auto-Protect Check	Verifies that Auto-Protect is enabled and working in the background to protect your computer from virus threats.
Last Virus Scan Check	Checks the date on which Norton AntiVirus performed a complete scan of your computer's hard disks to ensure that your disks are virus-free.
Shortcut Scan	Checks for mismatched or missing program and file shortcuts and helps you locate them.
Registry Doctor (Windows 98/Me)	Checks for problems with the registry that might cause system problems.
Disk Integrity (Windows 98/Me)	Checks that your local hard disks are not showing any signs of hardware failure.
Disk Fragmentation (Windows 98/Me)	Checks the level of fragmentation on your local hard disks and starts Speed Disk if the fragmentation level is too high.

About One Button Checkup Advanced options

The One Button Checkup Advanced Options dialog box has three tabs that let you manage ignored problems, previous repairs, and future scheduling.

General tab	Lets you delete problems that you previously indicated that One Button Checkup should ignore. See "Ignore problems found by One Button Checkup" on page 65.
Repair History tab	Lets you specify how long to keep a record of One Button Checkup repairs. See "Set One Button Checkup Repair History options" on page 68.
Scheduling tab	Lets you schedule automatic One Button Checkups. See "Schedule One Button Checkup scans" on page 68.

Set Norton Utilities options

The Norton Utilities options let you control the display of introductory messages, the utilities that should start up with Windows, and the behavior of the Windows Recycle Bin if Norton Protection is enabled.

To set Norton Utilities options

See "Access Norton SystemWorks tools" on page 55.

1. Start Norton SystemWorks Professional Edition.
2. In the Norton SystemWorks Professional Edition main window, click **Options** > **Norton Utilities**.
3. Specify the following settings:

General Settings	Control the display of splash screens and introductory information.
Startup Programs	Set the Norton Utilities applications (Norton Disk Doctor and Norton System Doctor) that start up along with Windows.
Recycle Bin	Specify the status of the Recycle Bin when you open it. You can set this option to open UnErase Wizard, recently deleted files, all protected files, or the standard Windows Recycle Bin.
Norton Protection	Define how to protect deleted files.

4. Click **OK**.

Set Norton System Doctor startup options

Norton System Doctor continuously monitors your computer to keep it free of problems and running at peak efficiency. It can alert you when conditions require attention, and fix many problems automatically, without interrupting your work.

To take full advantage of Norton System Doctor monitoring capabilities, leave it running at all times. You can also specify whether you want Norton System Doctor to automatically start when Windows starts.

While the default settings are ideal for most users, Norton System Doctor is customizable. For example, you can do the following:

- Specify the conditions that Norton System Doctor monitors by adding and removing sensors.
- Select the critical conditions that you want Norton System Doctor to fix automatically.
- Run Norton System Doctor minimized or docked to preserve valuable desktop space.

See "Use online Help" on page 94.

For more information about Norton System Doctor capabilities and customization, see the online Help.

To set Norton System Doctor startup options

See "Access Norton SystemWorks tools" on page 55.

1. Start Norton SystemWorks Professional Edition.
2. In the Norton SystemWorks main window, click **Norton Utilities** > **Find and Fix Problems** > **Norton System Doctor**.
3. In the Norton System Doctor main window, click **View** > **Options**.
4. In the Norton System Doctor Options dialog box, on the Window Settings tab, in the Startup Options group, check or uncheck an option. Your options are:

Start Automatically with Windows	Norton System Doctor starts automatically the next time that Windows starts.
Start Minimized	The Norton System Doctor window is minimized when it starts.

5. Click **OK**.

Check Norton AntiVirus system status

If Norton AntiVirus is behaving in an unexpected way, or if you're not sure that it is scanning your entire computer for viruses, check the status of its configuration.

In the Norton SystemWorks Professional Edition main window, in the Norton AntiVirus Status pane, a check mark indicates that the system status is OK and a triangle indicates that your system needs attention. If you see a triangle, review the features and services to see which area needs attention.

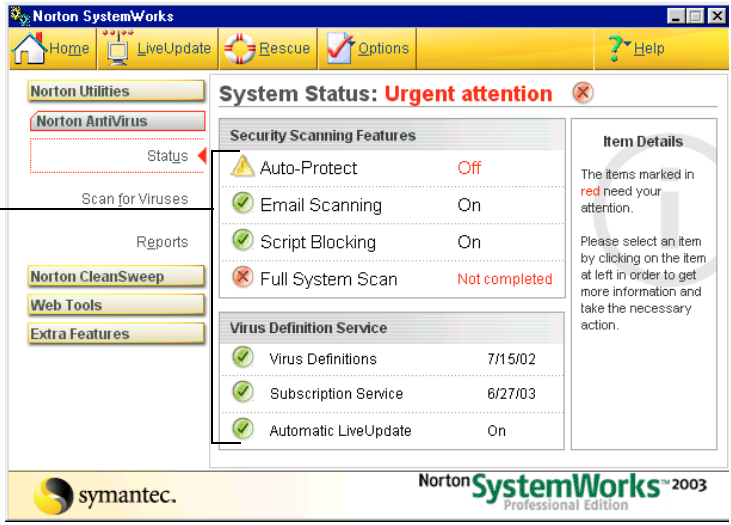
See "Customize Norton AntiVirus" on page 81.

If you need to adjust any settings, access the Norton AntiVirus Options dialog box.

To check Norton AntiVirus system status

See "Access Norton SystemWorks tools" on page 55.

1. Start Norton SystemWorks Professional Edition.
2. In the Norton SystemWorks Professional Edition main window, click **Norton AntiVirus** > **Status**.



3 In the System Status window, review the status to the left of each feature.

4 For more information about a particular feature, in the left pane, click the feature.
The right pane displays a description and a link to more information about the feature.

Check Office Plug-in status

Office Plug-in protects Microsoft Office documents from viruses, worms, and virus-like activities. It scans those documents whenever you open them in an Office program. You can enable Office Plug-in in the Norton AntiVirus Options dialog box.

If you have set a password for Norton AntiVirus Options, you must enter the password before you can view or adjust the settings.

To check Office Plug-in status

See "Access Norton SystemWorks tools" on page 55.

1 Start Norton SystemWorks Professional Edition.

2 In the Norton SystemWorks Professional Edition main window, click **Options** > **Norton AntiVirus**.

3 In the left pane of the Options window, under Other, click **Miscellaneous**.

See "Check Norton AntiVirus system status" on page 80.

4 Verify that Office Plug-in is enabled.

Customize Norton AntiVirus

If you are using Windows 2000/XP and you do not have Local Administrator access, you cannot change Norton AntiVirus options. If you are an administrator and share your computer with others, keep in mind that the changes you make apply to everyone using the computer.

The default settings for Norton AntiVirus provide complete virus protection for your computer. However, you may want to adjust them to optimize system performance or disable options that do not apply.

See "Password protect Norton AntiVirus options" on page 87.

Norton AntiVirus provides password protection for your option settings. You can enable, change, and reset a password so unauthorized users cannot tamper with your settings.

All the settings for Options are organized into three main categories. The options contained under each category are as follows.

Category	Options
System	Auto-Protect ▪ Bloodhound ▪ Advanced ▪ Exclusions Manual Scan ▪ Bloodhound ▪ Exclusions
Internet	Email ▪ Advanced Instant Messenger LiveUpdate
Other	Inoculation (Windows 98/98SE/Me) Miscellaneous

See "Change Norton AntiVirus options" on page 85.

This section does not describe how to change the individual options, but gives a general description of what they do and how you can find them. For specific information about a particular option, check the online Help.

About System options

The System options control scanning and monitoring of your computer. You use System options to determine what gets scanned, what the scan is looking for, and what happens when a virus or virus-like activity is encountered.

With higher levels of protection, there can be a slight trade-off in computer performance. If you notice a difference in your computer's performance after you install Norton SystemWorks Professional Edition, you may want to set protection to a lower level or disable those options that you do not need.

Option	Description
Auto-Protect	Determine if Auto-Protect starts when you start your computer, what it looks for while monitoring your computer, and what to do when a virus is found. Bloodhound is the scanning technology that protects against unknown viruses. Use these options to set its level of sensitivity in Auto-Protect. Advanced options determine the activities to be monitored when scanning for virus-like activities and when scanning floppy disks. Exclusions specify the files that should not be scanned by file name extension or by specific file name. Be careful not to exclude the types of files that are more likely to be infected by viruses such as files with macros or executable files.
Manual Scan	Determine what gets scanned and what happens if a virus is found during a scan that you request. Manual Scan options also include Bloodhound and Exclusions subcategories.

About Internet options

Internet options define what happens when your computer is connected to the Internet. You use Internet options to define how Norton AntiVirus should scan email and instant messenger attachments, enable Worm Blocking, and determine how LiveUpdates should be applied.

Option	Description
Email	Enable email scanning and Worm Blocking, and define how Norton AntiVirus should behave while scanning email messages. Scanning incoming email protects your computer against viruses sent by others. Scanning outgoing email prevents you from inadvertently transmitting viruses or worms to others. You can choose to scan incoming or outgoing email, or both, and to display an icon or progress indicator while scanning. You can set options to automatically repair, quarantine, or delete infected email with or without interaction with you. Advanced options determine what to do when scanning email.
Instant Messenger	Determine what instant messengers to support, how to configure a new IM, and what happens if a virus is found during an instant messenger session.
LiveUpdate	Enable Automatic LiveUpdate and define how updates should be applied. Automatic LiveUpdate checks for updated virus definitions and program updates automatically when you are connected to the Internet.

About Other options

Other options include Inoculation settings for Windows 98/98SE/Me and Miscellaneous settings. You can enable Inoculation, cause an alert if a system file changes, and set a variety of miscellaneous options.

Option	Description
Inoculation	Enable Inoculation and, if a system file changes, choose to update the inoculation snapshot or repair the file by restoring it to its original values. Inoculation options are available only on Windows 98/98SE/Me.
Miscellaneous	Back up file in Quarantine before attempting a repair. (This option is automatically set to On.) Enable Office Plug-in. If you upgrade to Microsoft Office 2000 or later after Norton SystemWorks Professional Edition is installed, you must enable this option to automatically scan Microsoft Office files. Alert me if my virus protection is out of date. Scan files at system startup (Windows 98/98SE only). Enable password protection for options.

Change Norton AntiVirus options

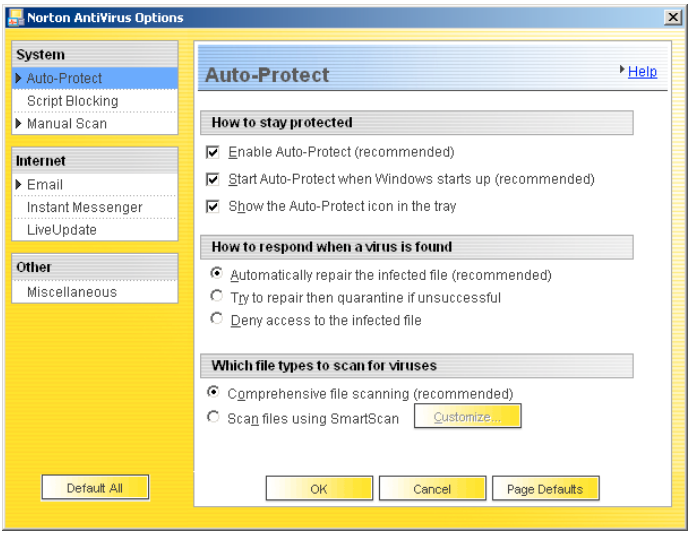
You change the settings for Norton AntiVirus options in the Norton AntiVirus Options window.

To change settings

See "Access Norton SystemWorks tools" on page 55.

1. Start Norton SystemWorks Professional Edition.
2. In the Norton SystemWorks Professional Edition main window, click **Options** > **Norton AntiVirus**.

If you set a password for Options, Norton AntiVirus asks you for the password before you can continue.



3 In the Norton AntiVirus Options window, in the left pane, click an option in the list.
Options with an arrow to the left have sub-options. As you click an option, the corresponding settings for the selected option appear in the right pane.

4 Select any settings you want to change.

5 Click **OK**.
These settings now take precedence over the preset options. The changes take effect immediately.

See "If you need to restore default settings in Norton AntiVirus Options" on page 88.

If you need to restore Norton AntiVirus default settings in Options

You can change any or all of the options listed. If you have made a number of changes that have unwanted results, you can restore all options to the default settings.

If you set a password for Options, Norton AntiVirus asks you for the password before you can view or adjust the settings.

To restore default settings on an Options page

❖ On the page for which you want to restore default settings, click **Page Defaults**.

To restore default settings for all options

❖ On any page in the Options window, click **Default All**.

Password protect Norton AntiVirus options

You can choose to protect or remove protection from your option settings with a password. If you specify a password, you are asked to enter a password every time you view the Options window, or temporarily enable or disable Auto-Protect.

If you forget your password, you can reset it from the Help button in the Norton SystemWorks Professional Edition main window.

To specify or remove a password

See "Access Norton SystemWorks tools" on page 55.

1. Start Norton SystemWorks Professional Edition.
2. In the Norton SystemWorks Professional Edition main window, click **Options** > **Norton AntiVirus**.
3. In the Norton AntiVirus Options window, under Other, click **Miscellaneous**.
4. Check or uncheck **Enable password protection for options**.
5. In the password dialog box, enter a password, then type it again to confirm it.
6. Click **OK**.

Reset password for Norton AntiVirus options

If you forget your password, you can change or reset it from the Help button in the Norton SystemWorks Professional Edition main window.

To reset a password

See "Access Norton SystemWorks tools" on page 55.

1. Start Norton SystemWorks Professional Edition.
2. In the Norton SystemWorks Professional Edition main window, click **Help** > **About Norton SystemWorks Professional Edition**.
3. On the Norton AntiVirus tab, click **Reset Password**.
4. In the password dialog box, enter the Reset Password Key exactly as it appears in the window.

5 Enter and re-enter a new password.

6 Click **OK**.

Monitoring Norton AntiVirus activities

Occasionally, you may need to look at previous Norton AntiVirus activities, such as when the last system scan was done or how many viruses were detected last week. Norton AntiVirus displays a record of its virus detection, application, and error activities in the *Log* Viewer.

Check the Activity Log to see what tasks Norton AntiVirus has performed and the results of those tasks to make sure your Options settings are set correctly for your particular needs.

To check activities

See "Access Norton SystemWorks tools" on page 55.

1 Start Norton SystemWorks Professional Edition.

2 In the Norton SystemWorks Professional Edition main window, click **Norton AntiVirus** > **Reports**.

3 In the Reports pane, on the Activity Log line, click **View Report**.

4 In the left pane, click the log you want to review.
As you click each log, the right pane changes and displays information specific to the particular log. The most recent activities appear at the top of the log.

If you need to restore default settings in Norton AntiVirus Options

You can change any or all of the options listed. If you have made a number of changes that have unwanted results, you can restore all options to the default settings.

To restore default settings on a page

❖ On the page for which you want to restore default settings, click **Page Defaults**.

To restore default settings for all options

❖ On any page in the Options dialog box, click **Default All**.

Set Norton CleanSweep options

The default settings for Norton CleanSweep provide a safe and efficient way of removing unwanted files from your computer. Use the settings to optimize system performance or disable options that do not apply. From the Norton SystemWorks Professional Edition main window, you can access the following Norton CleanSweep options:

Norton CleanSweep options	Let you specify how installations and other files are monitored so that they can be easily removed later. You can also specify file names and locations for backup and log files.
Fast & Safe Cleanup options	Let you specify the types of unnecessary files that Fast & Safe Cleanup should delete, including Internet history, Internet cache, Recycle Bin, lost clusters, and Windows temporary files. You can also schedule cleanup of these files.

To set Norton CleanSweep options

See "Access Norton SystemWorks tools" on page 55.

1. Start Norton SystemWorks Professional Edition.
2. In the Norton SystemWorks Professional Edition main window, click **Options** > **Norton CleanSweep**.

3 In the Norton CleanSweep Options dialog box, click a tab that contains the options that you want to change.
The tabs and options are:

Tab	Options
Safety Sweep	Fast Analysis ▪ Indicate that Safety Sweep should scan to find all files related to an installed program. This helps ensure that all of the program's related files are removed when you uninstall it. When Fast Analysis is turned off, the analysis takes longer but is more thorough. Safety Sweep ▪ Enable and disable Safety Sweep. When Safety Sweep is enabled, only green items can be deleted by Fast & Safe Cleanup, and all items are backed up. Safety Sweep must be disabled before Cookie Cleanup can remove cookies marked yellow.
Smart Sweep/ Internet Sweep	Turn Smart Sweep/Internet Sweep On or Off ▪ (Windows 98/Me only) Start or quit monitoring your computer with Smart Sweep and Internet Sweep. Load Smart Sweep/Internet Sweep on Startup ▪ Indicate if Smart Sweep and Internet Sweep should start when you start Windows. Automatically Monitor Installs When Loaded ▪ Indicate if Smart Sweep should always monitor installation activities when you install programs without asking you. Specify Program Names ▪ (Windows 98/Me only) Indicate the names of installation programs that Smart Sweep should always monitor. View or Delete Smart Sweep/Internet Sweep Logs ▪ View or clear the Smart Sweep/Internet Sweep activity text files.

Tab	Options
Backup/Restore	Specify a default backup folder ▪ Specify a folder where Norton CleanSweep keeps backups of uninstalled programs. The default is a Backup folder inside the Norton CleanSweep program folder. Specify confirmation in Uninstall Wizard ▪ Indicate if you want Norton CleanSweep to ask you for confirmation before uninstalling a program. Specify action in Restore Wizard ▪ Indicate if, when restoring, you want to overwrite a file if it already exists. Specify backup reminder for older backups ▪ Indicate if you want Norton CleanSweep to ask if you want to keep backups of uninstalled programs after 30 days.
View	View Master Log ▪ View, clear, save, and print the Master Log. View folder usage ▪ Display disk space used on available disk drives. Specify report file location ▪ Specify the location for the log of Norton CleanSweep activities.

Use the Norton CleanSweep Master Log

The Master Log contains a record of all Norton CleanSweep activities in chronological order. You can view, clear, save, and print the Master Log.

To use the Norton CleanSweep Master Log

See "Access Norton SystemWorks tools" on page 55.

1. Start Norton SystemWorks Professional Edition.
2. In the Norton SystemWorks Professional Edition main window, click **Options** > **Norton CleanSweep**.
3. In the Options dialog box, click **View**.
4. On the View tab, click **View Master Log**.

5 In the Master Log, select the action that you want to take.
Your options are:

View the entire log	Drag the scroll bar down.
Clear the log	Click **Clear**.
Save the log in another location or with a different name	Click **Save**.
Print the log	Click **Print**.

6 When you are finished, click **Close**.

Fast & Safe Cleanup options

You set Fast & Safe Cleanup options after you start Fast & Safe Cleanup.

To set Fast & Safe Cleanup options

See "Access Norton SystemWorks tools" on page 55.

1 Start Norton SystemWorks Professional Edition.

2 In the Norton SystemWorks Professional Edition main window, click **Norton CleanSweep** > **CleanUp** > **Fast & Safe Cleanup**.

3 In the Fast & Safe Cleanup window, click **Settings**.

4 In the Fast & Safe Cleanup Settings dialog box, click a tab that contains the options that you want to change.
The tabs and options are:

Tab	Options
File Types	Internet Cache ▪ Deletes all files in your Web browser's cache folder. If you use more than one browser, Fast & Safe Cleanup removes the files in each browser's cache folder. Internet History ▪ Cleans your browser's Internet history. The history contains links to all the Web pages you have visited recently. Empty Recycle Bin ▪ Deletes all files in the Windows Recycle Bin. Temporary Files ▪ Deletes all temporary files from your Windows\Temp folder. Temporary files are files that other programs have created and not deleted. Lost Cluster Files ▪ Deletes all lost cluster files. Cluster files are created by the Windows system utilities CheckDisk and ScanDisk.
Schedule	At system startup ▪ Deletes all files in selected categories after Windows starts. Every xx days at xx ▪ Deletes files in selected categories on a specific day and time.

5 Click **OK**.

For more information

Norton SystemWorks Professional Edition provides glossary terms, online Help, User's Guides in PDF format, tutorials on the Web, and links to the Knowledge Base on the Symantec Web site.

Look up glossary terms

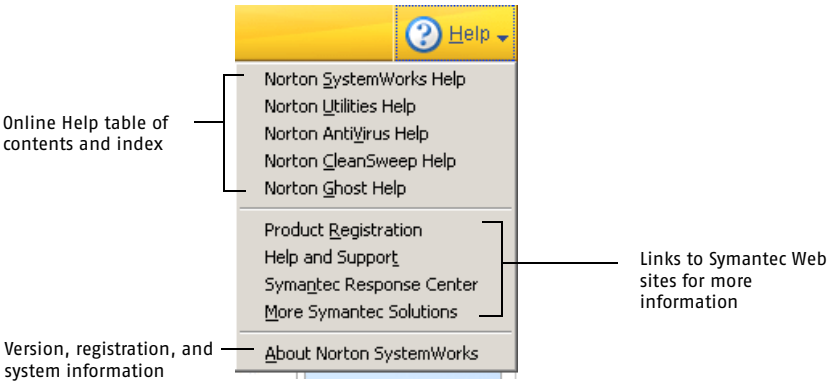
Technical terms that are italicized in the User's Guide are defined in the glossary, which is available in both the User's Guide PDF and Help. In both locations, clicking a glossary term takes you to its definition.

Use online Help

Help is always available throughout Norton SystemWorks Professional Edition. Help buttons or links to more information provide information specific to the task you are completing. The Help menu provides a comprehensive guide to all product features and tasks you can complete.

To access Norton SystemWorks Help

1. Start Norton SystemWorks Professional Edition.
2. In the Norton SystemWorks Professional Edition main window, click **Help** > **Norton SystemWorks Help**.



3. In the Help window, in the left pane, select a tab. Your choices are:

Contents	Displays the Help by topic
Index	Lists Help topics in alphabetical order by key word
Search	Opens a search field where you can enter a word or phrase

To get Help in a Norton SystemWorks dialog box

1. In a dialog box, click **Help** or the question mark icon to open a Help description.
2. In the Help topic window, click **More Info** to open online Help.

To see What's This Help in a dialog box

❖ Right-click any dialog box item, then click **What's This?**

View Norton Ghost Help

Norton Ghost has an extensive online Help system that describes how to use all of its features.

To get Help in Norton Ghost

1. In the Norton SystemWorks Professional Edition main window, click **Norton Ghost**.
2. In the Norton Ghost main window, select one of the following:
   - Ghost Explorer
   - Ghost Boot Wizard
3. In Ghost Explorer or Ghost Boot Wizard, click **Help**.

Access the User's Guide PDFs

This *Norton SystemWorks Professional Edition User's Guide* is provided on the Norton SystemWorks Professional Edition CD in PDF format. You must have Adobe Acrobat Reader 5.x installed on your computer to read the PDF.

PDFs for Norton AntiVirus, Norton Ghost, and GoBack 3 Personal Edition are also on the Norton SystemWorks Professional Edition CD.

To install Adobe Acrobat Reader

1. Insert the Norton SystemWorks Professional Edition CD into the CD-ROM drive.
2. Click **Browse CD**.
3. In the Norton SystemWorks Professional Edition CD window, double-click the **Manual** folder.
4. Double-click the **Acrobat** folder.
5. Double-click **ar500enu.exe**.
6. Follow the on-screen instructions to select a folder for Adobe Acrobat Reader and complete the installation.

Once you have installed Adobe Acrobat Reader, you can read the PDFs from the CD.

To read the User's Guide PDFs from the CD

1. Insert the Norton SystemWorks Professional Edition CD into the CD-ROM drive.
2. Click **Browse CD**.
3. Do one of the following:
   - Double-click the **Manual** folder, then double-click **Nswp2003.pdf** or **Ghost_guide.pdf**.
   - Double-click the **Manual** folder, double-click the **NAV** folder, then double-click **NAV2003.pdf**.
   - Double-click the **GoBack** folder, then double-click **GoBack.pdf**.

You can also copy the User's Guides to your hard disk and read them from there. The *Norton SystemWorks Professional Edition User's Guide* needs approximately 2.2 MB of disk space.

To read the User's Guides from your hard disk

1. Open the location into which you copied the PDF.
2. Double-click the PDF that you want to read.

Norton SystemWorks on the Web

The Symantec Web site provides extensive information about Norton SystemWorks Professional Edition. There are several ways to access the Symantec Web site.

To access the Symantec Web site from the Norton SystemWorks Professional Edition main window

1. Click **Help**.
2. Select the solution that you want. Your options are:

Technical Support Web site	Takes you to the Technical Support page of the Symantec Web site, from which you can search for solutions to specific problems, update your virus protection, and read the latest information about antivirus technology.
Visit the Symantec Web site	Takes you to the home page of the Symantec Web site, from which you can get product information on every Symantec product.

In Norton SystemWorks, the Norton AntiVirus Reports page contains a link to the Symantec online virus encyclopedia, as does the Windows Explorer toolbar.

To access the Web site from the Reports page

1. Start Norton SystemWorks Professional Edition.
2. In the Norton SystemWorks Professional Edition main window, click **Norton AntiVirus** > **Reports**.
3. On the Reports page, next to the Online Virus Encyclopedia heading, click **View Report**.

To access the Symantec Web site from Windows Explorer

1. Open Windows Explorer.
2. On the toolbar, on the Norton AntiVirus menu, click **View Virus Encyclopedia**.
   This option connects you to the Symantec Security Response Web page, from which you can search for information on all types of viruses.

You can always access the Symantec Web site through your Internet *browser*.

To access the Symantec Web site in your browser

- Point your browser to the Symantec Web site address, www.symantec.com.

Explore online tutorials

Symantec provides online tutorials that you can use to review many common tasks that Norton SystemWorks Professional Edition performs.

To explore the online tutorials

1. Point your browser to www.symantec.com/techsupp/tutorials.html
2. On the tutorials Web page, select the product and version for which you want a tutorial.
3. Click **continue**.
4. In the list of available tutorials for your product, select the one that you want to review.

Subscribe to the Symantec Security Response newsletter

Each month, Symantec publishes a free electronic newsletter that is focused on the needs of Internet security customers. It discusses the latest antivirus technology produced by Symantec Security Response, common viruses, trends in virus workings, virus outbreak warnings, and special virus definitions releases.

To subscribe to the Symantec Security Response newsletter

1. Point your browser to securityresponse.symantec.com
2. On the security response Web page, scroll down to the reference area of the page, then click **Newsletter**.
3. On the security response newsletter Web page, choose the language in which you want to receive the newsletter.
4. On the subscribe Web page, type the information requested, then click **Subscribe**.

Web Tools

5

Norton SystemWorks Professional Edition includes tools to make your Internet activities more efficient and reliable. Web Cleanup lets you quickly and safely delete the files and data that accumulate after you browse the Internet. Connection Keep Alive lets you maintain your *dial-up* Internet connection even when you're not actively using the connection.

About Web Cleanup

Web Cleanup locates and deletes temporary files and data items that collect on your computer after you browse the Internet with Internet Explorer. These items accumulate in your computer's Internet history and temporary *cache* file storage areas. Most of these temporary files have little value, occupy disk space, and slow down your computer's performance.

Web Cleanup works with Internet Explorer and its associated files.

Web Cleanup lets you view the contents of files before you delete them. You can add *domain names*, or URLs, to a list so Web Cleanup doesn't select them for deletion again.

Certain types of files, such as *cookies*, store personal data. You might want to keep these files to save the effort of repeatedly logging onto a frequently used secure site. However, this personal data could be the target of hackers or other malevolent programmers.

With Web Cleanup tools, you can:

- Automatically delete all unnecessary Web files and related data items with Quick Clean.
- View individual files and other Internet items to save or delete.

Delete unnecessary Web files

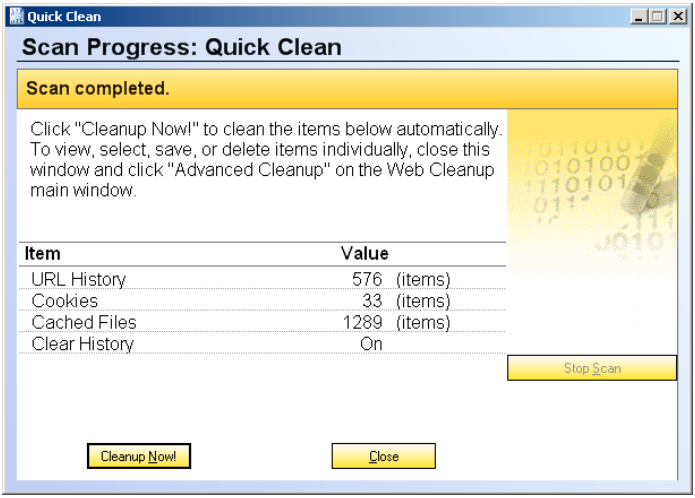
Web Cleanup Quick Clean scans for files that are typically left behind after Internet browsing. These include Internet history, *cache*, and *cookies* files. At the completion of the scan, you have the option to delete all the files that were found during the scan.

See "View Web Cleanup files" on page 100.

If you want to see more information about the files before they are deleted, you can select them individually.

To delete unnecessary Web files

1. In the Norton SystemWorks Professional Edition main window, click **Web Tools** > **Web Cleanup**.
2. In the Web Cleanup main window, click **Begin Quick Clean**.
   Quick Clean scans your computer and displays a summary of files and other Internet items that can be deleted.

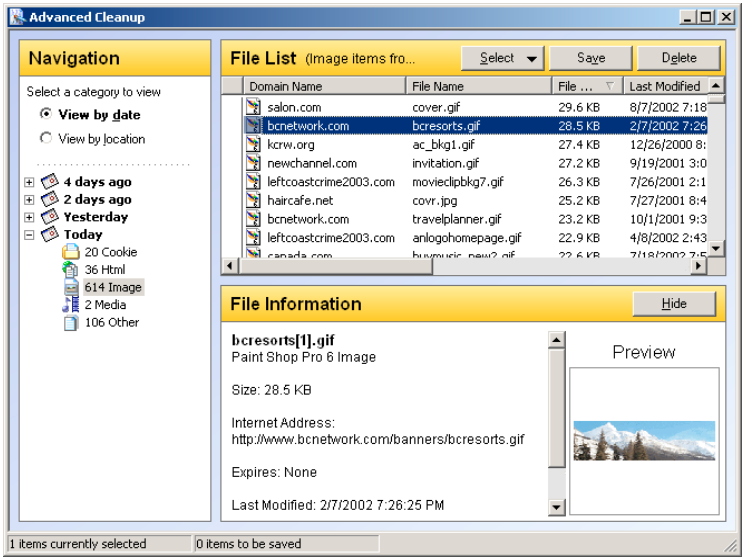

Quick Clean
Scan Progress: Quick Clean
Scan completed.
Click "Cleanup Now!" to clean the items below automatically. To view, select, save, or delete items individually, close this window and click "Advanced Cleanup" on the Web Cleanup main window.
Item
Value
URL History 576 (items)
Cookies 33 (items)
Cached Files 1289 (items)
Clear History On
Stop Scan
Cleanup Now!
Close

3. Click **Cleanup Now!** to delete all the summarized items automatically.
4. Click **Finish**.

View Web Cleanup files

Web Cleanup lets you view detailed information about all the files that are selected for deletion. You can view a selected file's creation date, its type,

its contents, and other information. Viewing information helps you determine if a file should be deleted or saved.



To view Web Cleanup files

See "Access Norton SystemWorks tools" on page 55.

1 Start Norton SystemWorks Professional Edition.

2 In the Norton SystemWorks Professional Edition main window, click **Web Tools** > **Web Cleanup**.

3 In the Web Cleanup main window, click **Advanced Cleanup**.

4 In the Navigation list, select how to organize the categories in the list. Your choices are:

View by date	Lists file categories chronologically with the most recently viewed Web site files listed first
View by location	Lists file categories alphabetically by associated domain name

5 Expand the Navigation list by clicking the plus sign next to a Web site or category icon.

6 Click a file category to display individual files in the File List.

7 To close the File Information pane and view more items in the File List, click **Hide**.

8 To sort the File List, click a column heading.
Expand the window or use the horizontal scroll bar to see more columns. The columns include the following information.

Domain Name	Web site name or URL
File Name	File name on the disk
File Size	The size in bytes on your hard disk
Last Modified	The date when the file was last changed on the hard disk
Expires	If the file is a cookie, the date when it expires
Last Sync	If the file is a synchronized file, the date when the item was last synchronized with another device (such as a handheld computer)
Last Accessed	The date when the domain name was last accessed from your computer

9 In the File List, click an item to display more information in the File Information pane.
If you closed the pane, click **Show** to display File Information.

10 In the File List, select one or more items using one of the commands on the Select menu.

11 Identify what to do with the selected items. Your choices are:

Save	Add the item to the Web Cleanup tab in the Web Tools Options dialog box. Domains in this list will not be deleted by Quick Clean.
Delete	Remove the selected file from the viewer list, but do not delete the file. It will show up in the scan next time, unless you add it to the list of excluded Web sites in the Web Cleanup Options list.

If you save a domain name, an alert message appears.

12 In the alert message, click **OK**.

13 When you are finished, close the View Files window.

Exclude domains from Web Cleanup activity

You can list Web *domain names* whose files should be excluded from Web Cleanup activity. It might help to have your Internet *browser* open to a Web

site's home page as you are typing, so that you can refer to the correct spelling of the domain name in your browser's *address* line.

You can indicate which domain names should be excluded by typing their names in the Web Cleanup tab of the Web Tools Options dialog box, or by selecting them in the Advanced Cleanup File List.

To exclude domain names in the Web Cleanup list

See "Access Norton SystemWorks tools" on page 55.

1. Start Norton SystemWorks Professional Edition.
2. In the Norton SystemWorks Professional Edition main window, click **Web Tools** > **Web Cleanup**.
3. In the Web Cleanup window, click **Options**.
4. On the Web Cleanup tab in the Web Tools Options dialog box, click **Insert**.
5. In the text entry area that appears, type the domain name that you want to exclude, then press **Enter**.
   For example, you can type www.symantec.com to add the Symantec Web site to the list.
6. Select the types of files that you want to exclude from cleanups.
   Your choices are:

Cookies	Any cookies that are associated with the domain.
Cache	Any cache files that are associated with the domain.

7. Click **Apply**.
   The domain name is added to the list of Web site names.
8. To have Web Cleanup delete Internet history files, check **Clear Microsoft Internet Explorer History**.
9. Repeat steps 4 through 7 until you have added all the domain names that you want to exclude from Web Cleanup activity.
10. Click **OK**.

To exclude domain names in the Advanced Cleanup File List

1. Start Norton SystemWorks Professional Edition.
2. In the Norton SystemWorks Professional Edition main window, click **Web Tools** > **Web Cleanup**.
3. In the Web Cleanup main window, click **Advanced Cleanup**.
4. In the Advanced Cleanup window, in the File List, select one or more items using one of the commands on the Select menu.

5 Click **Save**.
The domain name is added to the Web Cleanup domain name list in the Web Tools Options dialog box.

6 Repeat steps 4 and 5 until you have selected all of the domain names that you want to exclude.

About Connection Keep Alive

Connection Keep Alive prevents your *dial-up* Internet connection from disconnecting when you want to keep connected, but are not browsing the Internet, using email, or performing another Internet activity. Connection Keep Alive sends a small signal to a specific Web site. This prevents your Internet service provider from canceling the connection.

Some Internet service providers might not allow this activity. Read your *ISP's* User Agreement before enabling Connection Keep Alive.

Enable or disable Connection Keep Alive

You can enable Connection Keep Alive whenever you need it. You can also specify how long you want to stay connected before Connection Keep Alive quits.

You can enable or disable Connection Keep Alive from the Norton SystemWorks Professional Edition main window or from the Windows System tray.

To enable or disable Connection Keep Alive from the main window

See "Access Norton SystemWorks tools" on page 55.

1 Start Norton SystemWorks Professional Edition.

2 In the Norton SystemWorks Professional Edition main window, click **Web Tools > Connection Keep Alive**.

3 Do one of the following:

- Click **Enable Connection Keep Alive**.
- Click **Disable Connection Keep Alive**.

To enable or disable Connection Keep Alive from the System tray

1 On the Windows System tray, position the mouse pointer over the Norton Tray Manager icon until the Connection Keep Alive icon pops up.

2 Right-click the Connection Keep Alive icon.

3 Do one of the following:

- Click **Enable Connection Keep Alive**.
- Click **Disable Connection Keep Alive**.

View Connection Keep Alive status

After you have used Connection Keep Alive for the first time, you can view whether it is enabled or disabled in the following ways:

- When disabled, the Connection Keep Alive System tray icon has "X" through it.
- Hold the mouse cursor over the Norton Tray Manager icon until the Connection Keep Alive icon pops up. A tooltip displays its status.
- In the Norton SystemWorks window, the Connection Keep Alive panel indicates its status as ON (enabled) or OFF (disabled).

Set Connection Keep Alive options

You can specify if Connection Keep Alive should start when Windows starts, the level of activity it uses, the Web sites to which it sends signals, and when to stop sending signals. You can access Connection Keep Alive options from the Norton SystemWorks Professional Edition main window or from the Windows System tray.

To set Connection Keep Alive options from the main window

See "Access Norton SystemWorks tools" on page 55.

1 Start Norton SystemWorks Professional Edition.

2 In the Norton SystemWorks Professional Edition main window, click **Options** > **Web Tools**.

3 Click the **Connection Keep Alive** tab.

4 Make changes to the settings.
Your options are:

Automatically start with Windows	Connection Keep Alive is enabled when Windows starts up.
Display splash screen on startup	Connection Keep Alive displays a splash screen when Windows starts up.

Keep Alive Level Low/High	The frequency with which Connection Keep Alive sends signals to (pings) its network. For UDP and ICMP network communications protocols, the Low or High settings can be used. For the HTTP communications protocol, only the High setting is used.
Network traffic destination My Favorites My Homepage <ping.symantec.com>	When simulating network traffic, Connection Keep Alive sends signals to (pings) the Web sites in My Favorites, My Homepage, the Symantec Web site, ping.symantec.com, or another site that you enter to replace ping.symantec.com. If the Keep Alive Level is set to High, and you add your own Web site, be sure to include the HTTP prefix, for example http://www.myownurl.com
Simulate network activity every XX minute(s)	Connection Keep Alive sends a signal every 1, 2, 3, or more minutes, up to 15. The default is 1 minute.
Disable when inactive for more than XX minute(s)	If there is no mouse or keyboard activity, Connection Keep Alive disables itself after the indicated period.
Display timeout warning message	Connection Keep Alive displays a warning message before disabling itself after the scheduled number of minutes. The message remains for a countdown of 60 seconds. If you respond to the message, Connection Keep Alive remains active.

5 When you are finished, click **OK**.

To enable or disable Connection Keep Alive from the System tray

1 On the Windows Desktop, right-click the Connection Keep Alive tray icon.

2 Click **Connection Keep Alive Options**.

3 In the Connection Keep Alive Options dialog box, change the settings.

4 Click **OK**.

Revert your hard disk with GoBack 3 Personal Edition

6

GoBack 3 Personal Edition is system recovery software that integrates into your computer's operating system and records all changes to your hard disk. Any time your system experiences a problem due to a bad installation or system *crash*, use GoBack 3 Personal Edition to revert your hard disk to a stable state.

If you install GoBack 3 Personal Edition, you must uninstall it before upgrading your operating system. See "To uninstall GoBack 3 Personal Edition" on page 110.

About GoBack 3 Personal and Deluxe Editions

The version of GoBack included with Norton SystemWorks is the Personal Edition. Consider upgrading to GoBack 3 Deluxe Edition to take advantage of additional flexibility and customization, as well as password protection for the revert feature.

You can view information on the features in GoBack 3 Deluxe Edition, as well as special pricing available to owners of Norton SystemWorks, by clicking Upgrade in the GoBack main window.

Install GoBack 3 Personal Edition

In Windows 98/Me, GoBack 3 Personal Edition will not install on hard disks that are running in MS-DOS Compatibility mode.

GoBack 3 Personal Edition typically requires ten percent of your available hard disk space. If less than twenty percent of your total hard disk space is available, GoBack 3 Personal Edition uses half of the available space.

Do not use GoBack 3 Personal Edition with Windows 2000 Server due to the large number of server-based events that are generated.

In addition to the Norton SystemWorks minimum requirements, GoBack 3 Personal Edition has the following system requirements:

- 200 MB of available hard disk space
- Screen display capable of 800 x 600 resolution

Before installation

Before installing GoBack 3 Personal Edition, back up your system and close all open programs, including antivirus applications.

When installing GoBack 3 Personal Edition, you can choose between Easy Install and Custom Install.

Easy Install (recommended for most users)	Allocates ten percent of each of your hard disks to GoBack 3 Personal Edition automatically. If you have multiple partitions (logical hard drives) on a single hard disk, GoBack 3 Personal Edition allocates space on the partition with the most unused space.
Custom Install	Lets you choose the hard disks that you want GoBack 3 Personal Edition to protect and the amount of space that you want GoBack 3 Personal Edition to use on each of them. If you have multiple partitions on a hard disk, GoBack 3 Personal Edition requires that all partitions be protected.

Installation

If you are installing on Windows 2000/XP, ensure that you are logged onto that computer as an *Administrator* or as a user with administrative privileges.

To install GoBack 3 Personal Edition

1. Insert the Norton SystemWorks Professional Edition CD into the CD-ROM drive.
2. In the Norton SystemWorks Professional Edition CD window, click **Install GoBack**.

3 In the GoBack Setup Wizard, click **Yes** to accept the license agreement, then click **Next**.

4 Click **Show README File** to view the Readme file, then click **Next**. If you do not have Adobe Acrobat Reader installed on your computer, GoBack 3 Personal Edition will ask you if you want to install it.

5 To install Adobe Acrobat Reader, click **Install Adobe Acrobat**, then click **Next**.

6 In the registration confirmation dialog box, ensure that your name and organization information are correct, then click **Next**.

7 Select the type of install that you want.
Your options are:

Easy Install (recommended)	This option lets GoBack 3 Personal Edition allocate approximately ten percent of your hard disk space to its history files.
Custom Install	This option lets you specify a partition on which to install GoBack 3 Personal Edition, and specify the maximum amount of disk space that GoBack 3 Personal Edition can allocate to its history files.

8 Confirm a location for the GoBack 3 Personal Edition installation files, then click **Next**.

9 Confirm the hard disk on which GoBack 3 Personal Edition will be installed, then click **Finish**.
During this process, GoBack 3 Personal Edition examines your local hard disks.

10 Click **Yes** if you want a shortcut to GoBack 3 Personal Edition placed on your desktop.

11 Click **OK** to confirm that installation is complete.
Your computer restarts.

After installation

After restarting, a GoBack 3 Personal Edition *icon* appears in the Windows System tray. GoBack 3 Personal Edition monitors your computer without requiring any action on your part.

GoBack 3 Personal Edition creates a .bin file on each protected physical hard disk. If a physical hard disk has multiple partitions, GoBack 3 Personal Edition uses one .bin file to track all partitions on that disk. This

means that, if you need to revert your disk, all partitions on the disk will be reverted.

If you need to uninstall GoBack 3 Personal Edition

If you are upgrading your operating system or installing operating system service packs, you must first uninstall GoBack 3 Personal Edition. After uninstalling or disabling GoBack 3 Personal Edition, you will not be able to use its backups to restore your hard disk.

To uninstall GoBack 3 Personal Edition

1. On the Windows taskbar, click **Start** > **Settings** > **Control Panel** > **Add/Remove Programs**.
2. Select GoBack 3 Personal Edition from the list of programs, then do one of the following:
   - In Windows 2000/XP, click **Remove**.
   - In Windows 98/Me, click **Add/Remove**.
3. Click **OK** to confirm the deletion of GoBack 3 Personal Edition.

When you're finished uninstalling GoBack 3 Personal Edition, restart your computer.

Access GoBack 3 Personal Edition

You can access GoBack 3 Personal Edition from the Norton SystemWorks Professional Edition main window, from the Start menu, from the Windows system tray, from a shortcut on your desktop, or during your computer's startup process.

To access GoBack 3 Personal Edition from the Norton SystemWorks Professional Edition main window

1. Do one of the following:
   - On the Windows taskbar, click **Start** > **Programs** > **Norton SystemWorks** > **Norton SystemWorks**.
   - On the Windows XP taskbar, click **Start** > **All Programs** > **Norton SystemWorks** > **Norton SystemWorks**.
2. In the Norton SystemWorks Professional Edition main window, click **GoBack**.

To access GoBack 3 Personal Edition from the Start menu

❖ Do one of the following:

- On the Windows taskbar, click **Start** > **Programs** > **GoBack**.
- On the Windows XP taskbar, click **Start** > **All Programs** > **GoBack**.

To access GoBack 3 Personal Edition from the System tray

❖ In the Windows system tray, click the GoBack 3 Personal Edition icon.

To access GoBack 3 Personal Edition from the desktop

❖ On the Windows desktop, double-click the **GoBack 3** icon.

To access GoBack 3 Personal Edition during startup

1 Restart your computer.

2 When the GoBack Boot Screen appears, press the **Spacebar**.

For more information

GoBack 3 Personal Edition Help, tutorials, and the *GoBack 3.0 Personal and Deluxe Edition User's Guide* are available from the GoBack 3 Personal Edition main window. Use them to learn more about reverting a disk, setting options, and disabling GoBack 3 Personal Edition.

To access more information

See "Access GoBack 3 Personal Edition" on page 110.

1 Start GoBack 3 Personal Edition.

2 In the GoBack 3 Personal Edition main window, select an item. Your choices are:

Help	Access online Help. GoBack 3 Personal Edition Help includes information on how to use GoBack 3 Personal Edition.
Tutorial	Search for Help by key word.
GoBack menu icon	Access the *GoBack 3.0 Personal and Deluxe Edition User's Guide* PDF.

Keeping current with LiveUpdate

7

Symantec products depend on current information to protect your computer from newly discovered threats. Symantec makes this information available to you through LiveUpdate. Using your Internet connection, LiveUpdate obtains program updates and protection updates for your computer.

Your normal Internet access fees apply when you use LiveUpdate.

If you are using Norton SystemWorks Professional Edition on Windows 2000/XP, you must have Administrator access rights to run LiveUpdate.

About program updates

Program updates are minor improvements to your installed product. These differ from product upgrades, which are newer versions of entire products. Program updates that have self-installers to replace existing software code are called patches. Patches are usually created to extend operating system or hardware compatibility, adjust a performance issue, or fix bugs.

LiveUpdate automates the process of obtaining and installing program updates. It locates and obtains files from an Internet site, installs them, and then deletes the leftover files from your computer.

About protection updates

Protection updates are files available from Symantec, by subscription, that keep your Symantec products up-to-date with the latest anti-threat

technology. The protection updates you receive depend on which product you are using.

Norton AntiVirus, Norton SystemWorks	Users of Norton AntiVirus and Norton SystemWorks receive virus definition service updates, which provide access to the latest virus signatures and other technology from Symantec.
Norton Internet Security	In addition to the virus definition service, users of Norton Internet Security also receive protection updates to the Web filtering service, the intrusion detection service, and Spam Alert. The Web filtering service updates provide the latest lists of Web site addresses and Web site categories that are used to identify inappropriate Web content. The intrusion detection service updates provide the latest predefined firewall rules and updated lists of applications that access the Internet. These lists are used to identify unauthorized access attempts to your computer. Spam Alert updates provide the latest spam definitions and updated lists of spam email characteristics. These lists are used to identify unsolicited email.
Norton Personal Firewall	Users of Norton Personal Firewall receive intrusion detection service updates for the latest predefined firewall rules and updated lists of applications that access the Internet.

About your subscription

See "Subscription policy" on page 282.

Your Symantec product includes a complimentary, limited-time subscription to protection updates for the subscription services that are used by your product. When the subscription is due to expire, you are prompted to renew your subscription.

If you do not renew your subscription, you can still use LiveUpdate to obtain program updates. However, you cannot obtain protection updates and will not be protected against newly discovered threats.

When you should update

Run LiveUpdate as soon as you have installed your product. Once you know that your files are up-to-date, run LiveUpdate regularly to obtain updates. For example, to keep your virus protection current, you should use

LiveUpdate once a week or whenever new viruses are discovered. Program updates are released on an as-needed basis.

Request an update alert

To ensure your protection updates are current, you can request to receive an email alert whenever there is a high-level virus outbreak or other Internet security threat. The email alert describes the threat, provides detection and removal instructions, and includes advice on keeping your computer safe. You should always run LiveUpdate after you receive one of these alerts.

To request an update alert

1. From your Web browser, navigate to http://securityresponse.symantec.com/avcenter
2. On the Security Response Web page, scroll to the bottom of the page, then click **Symantec security response Free subscription**.
3. On the security alert subscription Web page, fill in the subscription form.
4. Click **Send me FREE Security Alerts**.

If you run LiveUpdate on an internal network

If you run LiveUpdate on a computer that is connected to a network that is behind a company firewall, your network administrator might set up an internal LiveUpdate server on the network. LiveUpdate should find this location automatically.

If you have trouble connecting to an internal LiveUpdate server, contact your network administrator.

If you can't use LiveUpdate

When new updates become available, Symantec posts them on the Symantec Web site. If you can't run LiveUpdate, you can obtain new updates from the Symantec Web site.

Your subscription must be current to obtain new protection updates from the Symantec Web site.

To obtain updates from the Symantec Web site

1. Point your Web browser to securityresponse.symantec.com
2. Follow the links to obtain the type of update that you need.

Obtain updates using LiveUpdate

LiveUpdate checks for updates to all of the Symantec products that are installed on your computer.

If you connect to the Internet through America Online (AOL), CompuServe, or Prodigy, connect to the Internet first, and then run LiveUpdate.

To obtain updates using LiveUpdate

1. Open your Symantec product.
2. At the top of the window, click **LiveUpdate**.
   You might receive a warning that says that your subscription has expired. Follow the on-screen instructions to complete the subscription renewal.
3. In the LiveUpdate window, click **Next** to locate updates.
4. If updates are available, click **Next** to download and install them.
5. When the installation is complete, click **Finish**.

Some program updates may require that you restart your computer after you install them.

Set LiveUpdate to Interactive or Express mode

LiveUpdate runs in either Interactive or Express mode. In Interactive mode (the default), LiveUpdate downloads a list of updates available for your Symantec products that are supported by LiveUpdate technology. You can then choose which product updates you want to install. In Express mode, LiveUpdate automatically installs all available updates for your Symantec products.

To set LiveUpdate to Interactive or Express mode

1. Open your Symantec product.
2. At the top of the window, click **LiveUpdate**.
3. On the LiveUpdate welcome screen, click **Configure**.
4. On the General tab of the LiveUpdate Configuration dialog box, select **Interactive Mode** or **Express Mode**.
5. If you selected Express Mode, select how you want to start checking for updates:
   - To have the option of cancelling the update, select **I want to press the start button to run LiveUpdate**.
   - To have any updates installed automatically whenever you start LiveUpdate, select **I want LiveUpdate to start automatically**.
6. Click **OK**.

Turn off Express mode

Once you have set LiveUpdate to run in Express mode, you can no longer access the LiveUpdate Configuration dialog box directly from LiveUpdate. You must use the Symantec LiveUpdate control panel.

To turn off Express mode

1. On the Windows taskbar, click **Start** > **Settings** > **Control Panel**.
2. In the Control Panel window, double-click **Symantec LiveUpdate**.
3. On the General tab of the LiveUpdate Configuration dialog box, select **Interactive Mode**.
4. Click **OK**.

Run LiveUpdate automatically

You can have LiveUpdate check for protection updates automatically, on a set schedule, by enabling Automatic LiveUpdate. You must continue to run LiveUpdate manually to receive product updates.

Automatic LiveUpdate checks for an Internet connection every five minutes until a connection is found, and then every four hours. If you have an ISDN router that is set to automatically connect to your Internet service provider (ISP), many connections will be made, with connection and phone charges possibly being incurred for each connection. If this is a problem, you can set your ISDN router to not automatically connect to the ISP or disable Automatic LiveUpdate in the Norton AntiVirus options.

To enable Automatic LiveUpdate

1. Start Norton SystemWorks Professional Edition.
2. At the top of the Norton SystemWorks Professional Edition main window, click **Options** > **Norton AntiVirus**.
3. In the Options dialog box, under Internet, click **LiveUpdate**.
4. In the LiveUpdate pane, check **Enable Automatic LiveUpdate**.
5. Set how you want updates to be applied by selecting one of the following:

Apply updates without interrupting me	LiveUpdate checks for and installs protection updates without prompting you. LiveUpdate displays an alert when a protection update has been downloaded. You should still run LiveUpdate occasionally to check for program updates.
Notify me when updates are available	LiveUpdate checks for protection updates and asks if you want to install them.

6. Click **OK**.

To delete the schedule for Automatic LiveUpdate, disable Automatic LiveUpdate.

To disable Automatic LiveUpdate

1. Start Norton SystemWorks Professional Edition.
2. At the top of the Norton SystemWorks Professional Edition main window, click **Options** > **Norton AntiVirus**.
3. In the LiveUpdate pane, uncheck **Enable Automatic LiveUpdate**.
4. Click **OK**.

2

Norton AntiVirus

Protecting disks, files, and data from viruses

8

For added protection in Norton AntiVirus on Windows 98/98SE/Me, enable Inoculation to *alert* you if a system file changes.

Ensure that protection settings are enabled

Norton SystemWorks Professional Edition is configured to provide you with complete protection against viruses. It is unlikely that you need to change any settings. However, for maximum protection, you should ensure that your protection features are enabled.

Feature	Where to set	Maximum protection setting
Auto-Protect	**Options** > **Norton AntiVirus** > **Auto-Protect** > **Enable Auto-Protect**	Auto-Protect is set to **On**. For more information, see the online Help.
Email scanning	**Options** > **Norton AntiVirus** > **Email**	**Scan incoming Email** and **Scan outgoing Email** are checked. If your email program uses one of the supported communications protocols, both options are selected by default. For more information, see the online Help.

Feature	Where to set	Maximum protection setting
Timeout protection	**Options** > **Norton AntiVirus** > **Email**	**Protect against timeouts when scanning Email** is checked. To prevent connection timeouts while receiving large attachments, enable timeout protection. For more information, see the online Help.
Instant messenger scanning	**Options** > **Norton AntiVirus** > **Instant Messenger**	Instant messengers that you want to protect are checked. For more information, see the online Help.
Worm Blocking	**Options** > **Norton AntiVirus** > **Email**	**Enable Worm Blocking** and **Alert me when scanning email attachments** are checked. For more information, see the online Help.
Inoculation (Windows 98)	**Options** > **Norton AntiVirus** > **Inoculation**	**Inoculate Boot Records** is checked. For more information, see the online Help.

This table summarizes the maximum protection settings and where you can find them. For specific information about an option, check the online Help.

Manually scan disks, folders, and files

If Auto-Protect is enabled and the Norton AntiVirus options are set at their default levels, you normally would not need to scan manually. However, if you temporarily disabled Auto-Protect (for example, to load or use another program that conflicts with Norton AntiVirus), and you forgot to enable it again, it is possible that a virus could be on your hard disk undetected. You can scan your entire computer, or individual floppy disks, drives, folders, or files.

Although the default settings for manual scanning are usually adequate, you can raise the level of Bloodhound heuristics or adjust the options for manual scanning in the Options window. Check online Help for more information about manual scanning options.

Perform a full system scan

A full system scan scans all *boot records* and files on your computer.

To perform a full system scan

1. Start Norton SystemWorks Professional Edition.
2. In the Norton SystemWorks Professional Edition main window, click **Norton AntiVirus** > **Scan for Viruses**.
3. In the Scan for Viruses pane, click **Scan my computer**.
4. Under Actions, click **Scan**.
   When the scan is complete, a scan summary appears.
5. When you are done reviewing the summary, click **Finished**.

Scan individual elements

Occasionally, you may want to scan a particular file, removable drives, a floppy disk, any of your computer's drives, or any folders or files on your computer. You may have been working with floppy disks or have received a compressed file in an email message and suspect a virus. You can scan just a particular disk or individual element that you want to check.

To scan individual elements

1. Start Norton SystemWorks Professional Edition.
2. In the Norton SystemWorks Professional Edition main window, click **Norton AntiVirus** > **Scan for Viruses**.
3. In the Scan for Viruses pane, select the scan that you want to run.
4. Under Actions, click **Scan**.
   If you choose to scan all removable drives or a floppy disk, the scan starts automatically. If you choose to scan drives, folders, or files, a dialog box appears in which you choose which drives, folders, or files to scan.
5. In the dialog box, click **Scan** after making your selection.
   When the scan is complete, a scan summary appears.
6. When you are done reviewing the summary, click **Finished**.

If problems are found during a scan

See "If a virus is found during a scan" on page 131.

At the end of a scan, a summary report appears to tell you what Norton AntiVirus found during the scan. If a virus was found and you have requested that Norton AntiVirus repair the file automatically, it is listed as repaired. If the file cannot be repaired, it can be quarantined or deleted.

Create and use custom scans

See "Schedule a custom scan" on page 128.

You can create a custom scan if you regularly scan a particular segment of your computer and don't want to have to specify the segment to be scanned every time. You can also schedule the custom scan to run automatically.

You can delete the scan when it is no longer necessary. For example, if you are working on a project for which you need to frequently swap files with others, you might want to create a folder into which you copy and scan those files before using them. When the project is done, you can delete the custom scan for that folder.

To create a custom scan

1. Start Norton SystemWorks Professional Edition.
2. In the Norton SystemWorks Professional Edition main window, click **Norton AntiVirus** > **Scan for Viruses**.
3. In the Scan for Viruses pane, under Actions, click **New**.
4. In the opening window of the Norton AntiVirus Scan Wizard, click **Next**.
5. Do one or both of the following:
   - To select individual files to be scanned, click **Add files**.
   - To select folders and drives to be scanned, click **Add folders**.

   You can use both options to select the combination of items that you want.
6. In the resulting dialog box, select the items that you want to scan. If you select a folder, all files in that folder are included. If you select a drive, all folders and files on that drive are included.
7. Add the selected items to the list of items to scan by doing one of the following:
   - In the Scan Files dialog box, click **Open**.
   - In the Scan Folders dialog box, click **Add**.
8. To remove an item from the list, select it, then click **Remove**.

9 When you are done creating the list of items to be scanned, click **Next**.

10 Type a name for the scan by which you can identify it in the list of scans.

11 Click **Finish**.

Run a custom scan

When you run a custom scan, you do not have to redefine what you want to scan.

To run a custom scan

1 Start Norton SystemWorks Professional Edition.

2 In the Norton SystemWorks Professional Edition main window, click **Norton AntiVirus** > **Scan for Viruses**.

3 In the Scan for Viruses pane, select the custom scan.

4 Under Actions, click **Scan**.
When the scan is complete, a scan summary appears.

5 When you are done reviewing the summary, click **Finished**.

Delete a custom scan

You can delete custom scans if they are no longer needed.

To delete a custom scan

1 Start Norton SystemWorks Professional Edition.

2 In the Norton SystemWorks Professional Edition main window, click **Norton AntiVirus** > **Scan for Viruses**.

3 In the Scan for Viruses pane, select the scan that you want to delete.

If you click the button next to the scan name, the scan runs.

4 Under Actions, click **Delete**.

5 Click **Yes** to verify that you want to delete the scan.

Schedule scans

You can schedule customized virus scans that run unattended on specific dates and times or at periodic intervals. If you are using the computer when the scheduled scan begins, it runs in the background so that you do not have to stop working.

You cannot schedule the predefined scans in the scan list, but you can schedule any custom scans that you have created.

Schedule a custom scan

You have complete flexibility in scheduling custom scans. When you select how frequently you want a scan to run (such as daily, weekly, or monthly), you are presented with additional fields with which you can refine your request. For example, you can request a daily scan, then schedule it to occur every two days or every three days instead.

To schedule a custom scan

1. Start Norton SystemWorks Professional Edition.
2. In the Norton SystemWorks Professional Edition main window, click **Norton AntiVirus** > **Scan for Viruses**.
3. In the Scan for Viruses pane, select the scan that you want to schedule.

   If you click the button next to the scan name, the scan runs.
4. Under Schedule Task, click **Schedule**.
5. In the Schedule dialog box, if Show multiple schedules is checked, click **New** to enable the scheduling fields.
   If it is not checked, the fields are already enabled.
6. Set the frequency and time at which you want the scan to run.
   Most of the frequency options include additional options that let you further refine the schedule. Set the additional options as necessary.
7. When you are done, click **OK**.

You can also create multiple schedules for a scan. For example, you could run the same scan at the beginning of your work day and at the end.

To create multiple schedules for a single scan

1. Start Norton SystemWorks Professional Edition.
2. In the Norton SystemWorks Professional Edition main window, click **Norton AntiVirus** > **Scan for Viruses**.
3. In the Scan for Viruses pane, select the scan that you want to schedule.

If you click the button next to the scan name, the scan runs.

4. Under Schedule Task, click **Schedule**.
5. In the Schedule dialog box, check **Show multiple schedules**.
6. To set an additional schedule, click **New**.
7. Set the frequency and time at which you want the scan to run.
   Most of the frequency options include additional options that let you further refine the schedule. Set the additional options as necessary.
8. When you are done, click **OK**.

Edit scheduled scans

You can change the schedule of any scheduled scan, including the weekly full system scan.

To edit a scheduled scan

1. Start Norton SystemWorks Professional Edition.
2. In the Norton SystemWorks Professional Edition main window, click **Norton AntiVirus** > **Scan for Viruses**.
3. In the Scan for Viruses pane, select the scan that you want to schedule.

If you click the button next to the scan name, the scan runs.

4. Under Schedule Task, click **Schedule**.
5. Change the schedule as desired.
6. Click **OK**.

Delete a scan schedule

You can delete any scan schedule. Deleting the schedule does not delete the scan.

To delete a scan schedule

1. Start Norton SystemWorks Professional Edition.
2. In the Norton SystemWorks Professional Edition main window, click **Norton AntiVirus** > **Scan for Viruses**.
3. In the Scan for Viruses pane, select the scheduled scan that you want to delete.

If you click the button next to the scan name, the scan runs.

4. Under Schedule Task, click **Schedule**.
5. In the Schedule dialog box, check **Show multiple schedules**.
6. Select the schedule that you want to delete (if more than one).
7. Click **Delete**.
8. Click **OK**.

What to do if a virus is found

9

If Norton AntiVirus finds a virus on your computer, there are three possible resolutions to the problem:

- Fix the file
  Removes the *virus* from the file or if the *threat* is a worm or Trojan horse, deletes the file.
- Quarantine the file
  Makes the file inaccessible by any programs other than Norton AntiVirus. You cannot accidentally open the file and spread the virus, but you can still evaluate it for possible submission to Symantec.
- Delete the file
  Removes the virus from your computer by deleting the file that contains the virus, worm or Trojan horse. It should be used only if the file cannot be repaired or quarantined.

See "If you have files in Quarantine" on page 136.

Malicious *threats* can be found during a manual or scheduled scan or by Auto-Protect when you perform an action with an *infected file*. Threats can also appear during an instant messenger session or when sending an email. The way that you handle a threat differs depending on whether a scan or Auto-Protect found the threat.

If a virus is found during a scan

If Norton AntiVirus finds a virus, Trojan horse, or worm during a scan or from an instant messenger session, you either receive a summary of the automatic repair or deletion results, or you have to use the Repair Wizard to resolve the problem.

Review the repair details

If you have set your manual scan options so that Norton AntiVirus repairs files automatically, and all infected files could be repaired, the scan summary lists the number of files infected and repaired. This information is presented for status purposes only; you don't need to take further action to protect your computer. If you want to know more, you can check the repair details to see which files were infected and with what viruses.

To review the repair details

1. In the scanner window, in the Summary pane, click **More Details**.
2. When you are done reviewing the results, click **Finished**.

Use the Repair Wizard

If there are files that could not be fixed, or if you have set your manual scan options so that Norton AntiVirus asks you what to do when a virus is found, the Repair Wizard opens. If Norton AntiVirus did not attempt a repair, the Repair Wizard opens in the Repair pane. Otherwise, it opens in the Quarantine pane.

To use the Repair Wizard

1. If the Repair Wizard opens in the Repair pane, uncheck any files that you don't want Norton AntiVirus to fix.
   All files are checked by default. This is the recommended action.
2. Click **Fix**.
   If any files cannot be fixed or deleted, the Quarantine window opens. All files are checked to be added to the Quarantine by default. This is the recommended action.
3. In the Quarantine window, uncheck any files that you do not want to quarantine.
4. Click **Quarantine**.
   If any files could not be quarantined, the Delete pane opens.
   If you do not delete the infected files, the virus remains on your computer and can cause damage or be transmitted to others.
5. Uncheck any files that you do not want to delete.
6. Click **Delete**.
   Once all of the files have been repaired, quarantined, or deleted, the Summary pane of the scanner window opens.
7. When you are done reviewing the summary, click **Finished**.

After repairing a boot virus on your hard drive, restart your computer.

If a virus is found by Auto-Protect

Auto-Protect scans files for viruses and other malicious *threats* when you perform an action with them, such as moving them, copying them, or opening them. If it detects a virus or virus-like activity, in most cases you receive an *alert* telling you that a virus was found and repaired. How you proceed depends on the *operating system* that you are using.

If you are using Windows 98/98SE/Me

If a virus or threat is found and repaired by Auto-Protect in Windows 98/98SE/Me, you receive an alert telling you which file was repaired or deleted.

To close the alert

❖ Click **Finish**.

If you have set your options so that Auto-Protect asks you what to do when it finds a virus, the alert asks you to choose an action. The recommended action is always preselected.

Action	Result
Repair the infected file	Automatically eliminates the virus, Trojan horse, or worm and repairs or deletes the infected file. When a virus is found, Repair is always the best choice.
Quarantine the infected file	Isolates the infected file, but does not remove the threat. Select Quarantine if you suspect that the infection is caused by an unknown threat and you want to submit the threat to Symantec for analysis.
Delete the infected file	Erases both the threat and the infected file. Select Delete if Repair is not successful. Replace the deleted file with the original program file or backup copy. If the virus, Trojan horse, or worm is detected again, your original copy is infected.
Do not open the file, but leave the problem alone	Stops the current operation to prevent you from using an infected file. This action does not solve the problem. You will receive an alert the next time that you perform the same activity.

Action	Result
Ignore the problem and do not scan this file in the future	Adds the file that is suspected of containing a threat to the Exclusions list. When you add a file to the Exclusions list, the file is excluded from any future virus scans, unless you remove it from the list. Select this option only if you know that the file does not contain a virus.
Ignore the problem and continue with the infected file	Continues the current operation. Select this option only if you are sure that a virus, Trojan horse or worm is not at work. You will receive an alert again. If you are not sure what to do, select Do not open the file, but leave the problem alone.

If a file cannot be repaired, you receive an alert telling you that the repair was not made and recommending that you quarantine the file. You have the same options as those listed in the table, with the exception of Repair the infected file.

If you are using Windows 2000/XP

If a *threat* is found and either repaired or automatically deleted by Auto-Protect in Windows 2000/XP, you receive an alert telling you which file was repaired or deleted and which virus, Trojan horse, or worm was infecting the file. If you have an active Internet connection, clicking the virus name opens the Symantec Web page that describes the virus.

To close the alert

❖ Click **OK**.

If the file cannot be repaired, you receive two alerts, one telling you that Auto-Protect was unable to repair the file, and another telling you that access to the file was denied.

See "If you have files in Quarantine" on page 136.

You can set your Auto-Protect options to try to quarantine any infected files that it cannot repair. If you do this, you are informed if any files are quarantined.

To resolve problems with unrepaired files

See "Perform a full system scan" on page 125.

1 Run a full system scan on your computer to ensure that no other files are infected.

See "If a virus is found during a scan" on page 131.

2 Follow the recommended actions in the Repair Wizard to protect your computer from the infected files.

If a threat is found by Worm Blocking

See "Ensure that protection settings are enabled" on page 123.

If a program tries to email itself or email a copy of itself, it could be a worm trying to spread via email. A worm can send itself or a copy of itself in an email message without any interaction with you.

Worm Blocking continually scans outgoing email attachments for *worms*. If it detects a worm, you receive an alert telling you that a malicious worm was found.

The alert presents you with options and asks you what to do. If you were not sending an email message at that time, then it is probably a worm and you should quarantine the file. You can click Help on the alert for additional information about how to respond.

After you have responded to the *threat* and deleted the file, you could still have an infected system. Run LiveUpdate, scan your system, and, if necessary, go to the Symantec security response Web page (securityresponse.symantec.com) for the most up-to-date virus definitions clean-up tools.

If Inoculation alerts you about a change in system files

Inoculation protection is available on Windows 98/98SE/Me systems only.

See "Ensure that protection settings are enabled" on page 123.

System files can change for a variety of reasons. You may have updated your *operating system* or repartitioned your hard disk, or you could have a virus. Norton AntiVirus alerts you when a change occurs in your system files.

If you get an *alert* about a change in your system files, you have two options. You can update your Inoculation snapshot or repair the file. Before you repair the file, be sure your virus definitions are up-to-date and run a scan.

To respond to Inoculation changes

- In the Alert window, select the action that you want to take. Your options are:

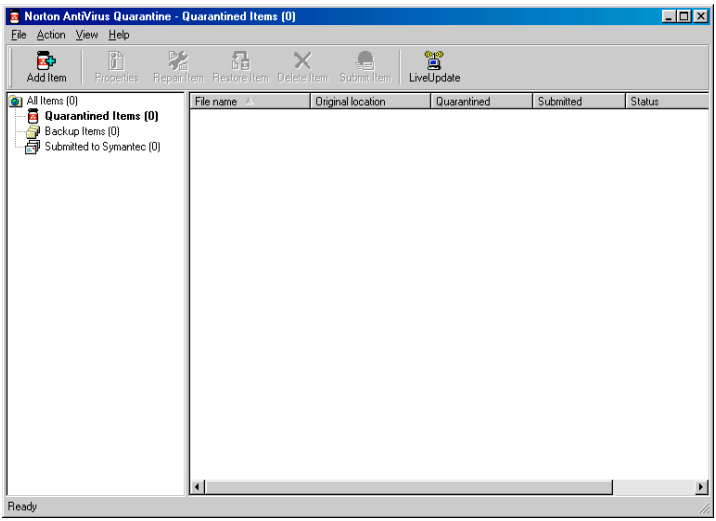
Update the saved copy of my Master Boot Record	Use if the alert appears after a legitimate change in system files.
Restore my Master Boot Record	Use if you are certain the system did not change for legitimate reasons.

If you have files in Quarantine

Once a file has been placed in Quarantine, you have several options. All actions that you take on files in Quarantine must be performed in the Quarantine window.

To open the Quarantine window

1. Start Norton SystemWorks Professional Edition.
2. In the Norton SystemWorks Professional Edition main window, click **Norton AntiVirus** > **Reports**.
3. In the Reports pane, on the Quarantined items line, click **View Report**.



The toolbar at the top of the Quarantine window contains all of the actions that you can perform on Quarantined files.

Add Item	Adds files to Quarantine. Use this action to quarantine a file that you suspect is infected. This action has no effect on files that are already in Quarantine.
Properties	Provides detailed information about the selected file and the virus that is infecting it.
Repair Item	Attempts to repair the selected file. Use this action if you have received new virus definitions since the file was added to Quarantine.

Restore Item	Returns the selected file to its original location without repairing it.
Delete Item	Deletes the selected file from your computer.
Submit Item	Sends the selected file to Symantec. Use this option if you suspect that a file is infected even if Norton AntiVirus did not detect it.
LiveUpdate	Runs LiveUpdate to check for new protection and program updates. Use this if you haven't updated your virus definitions for a while and then try to repair the files in Quarantine.

To perform an action on a file in Quarantine

1. Select the file on which you want to perform the action.
2. In the toolbar, select the action that you want to perform.
3. When you are finished, on the File menu, click **Exit**.

If Norton AntiVirus cannot repair a file

One of the most common reasons that Norton AntiVirus cannot automatically repair or delete an infected file is that you do not have the most up-to-date virus protection. Update your virus protection with LiveUpdate and scan again.

If that does not work, read the information in the report window to identify the types of items that cannot be repaired, and then take the appropriate action.

File type	Action
Infected files with .exe, .doc, .dot, or .xls file name extensions (any file can be infected)	Use the Repair Wizard to solve the problem. See "Use the Repair Wizard" on page 132.
Hard disk master boot record, boot record, or system files (such as IO.SYS or MSDOS.SYS) and floppy disk boot record and system files	Replace using the Rescue Disks or your operating system disks. For more information, see the online Help.

If your computer does not start properly

See "Create Emergency Disks" on page 28.

If you have a virus on your computer and need to start the computer from an uninfected disk to remove the virus, or if you need to restore a *boot record*, use your Rescue Disks. If you do not have Rescue Disks, you can use your Emergency Disks to start the computer and remove the virus. If you need to restore boot records and do not have Rescue Disks, or if you need to restore system files, you must reinstall Windows.

If you need to use Rescue Disks (Windows 98/98SE/Me)

You first need to determine if your Rescue Disks are current. This means that you have created or updated your Rescue Disks since you did any of the following:

- Added, modified, or removed internal hardware
- Added, modified, or removed hard disk partitions
- Upgraded your operating system
- Updated virus definitions

To use your Rescue Disks

1. Insert the Basic Rescue Boot floppy disk into drive A and restart your computer.
   The Rescue program runs in DOS.
2. Use the arrow keys to select the program that you want to run.
   A description of the selected program appears in the right pane of the Rescue program. Your choices are:

Norton AntiVirus	Scans your computer for viruses and repairs any infected files
Rescue Recovery	Checks and restores boot and partition information

3. Press **Enter** to run the selected program.
4. Follow the on-screen instructions for inserting and removing the Rescue Disks.
5. When the Rescue program is done, remove the Rescue Disk from drive A and restart your computer.

If you need to use Emergency Disks

See "Create Emergency Disks" on page 28.

If you have not created Rescue Disks, you can use Emergency Disks to restart your computer and scan for viruses.

To use Emergency Disks

1. Insert Emergency Disk 1 into drive A and restart your computer.
   The Emergency program runs in DOS.
2. Ensure that Antivirus is selected, then press **Enter** to begin the Norton AntiVirus Emergency program.
3. Follow the on-screen instructions for inserting and removing the Emergency Disks.
   The Emergency program automatically scans your computer and removes viruses.
4. When the Emergency program is done, remove the Emergency Disk from drive A and restart your computer.

If you are using the CD as an Emergency Disk

If you are using the Norton SystemWorks Professional Edition CD as an Emergency Disk, you can ignore all of the instructions to change disks, as all necessary information is on the CD.

You may need to change your computer's BIOS Setup options to start from the CD-ROM drive.

To use the CD as an Emergency Disk

1. Insert the Norton SystemWorks Professional Edition CD into the CD-ROM drive.
2. Restart your computer.
   The Emergency program scans your computer and removes viruses.

Look up viruses on the Symantec Web site

The Symantec Web site contains a complete list of all known viruses and related malicious code, along with descriptions. You must be connected to the Internet to look up viruses.

To look up viruses

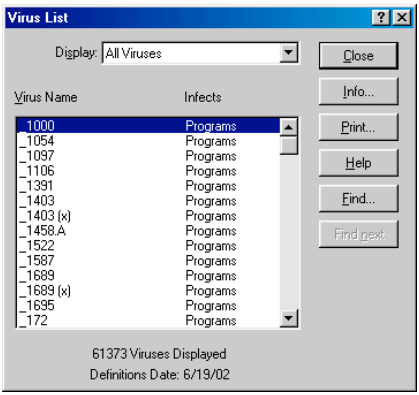
1. Start Norton SystemWorks Professional Edition.
2. In the Norton SystemWorks Professional Edition main window, click **Norton AntiVirus** > **Reports**.

3 In the Reports pane, on the Online Virus Encyclopedia line, click **View Report**.
The Symantec Web site opens in your Internet browser.

4 Use the links on the Web page to access the virus information for which you are looking.

Look up viruses in Norton AntiVirus

If you don't have an active Internet connection, you can look up a virus name from within Norton AntiVirus. The Virus List dialog box lists the viruses in the current virus definition service files on your local computer. Because of the large number of viruses, the Virus List file does not include descriptions of each virus.



See "Keeping current with LiveUpdate" on page 113.

To ensure that you have the latest virus definitions, run LiveUpdate.

To look up virus names and definitions

1 Start Norton SystemWorks Professional Edition.

2 In the Norton SystemWorks Professional Edition main window, click **Norton AntiVirus** > **Reports**.

3 In the Reports pane, on the Virus List line, click **View Report**.

To get more information about a specific virus

1 In the Virus List dialog box, select the virus about which you want more information.

2 Click **Info**.

3 When you are done viewing the list, in the Virus List dialog box, click **Close**.

3

Norton Utilities

Finding and fixing problems

10

Norton SystemWorks Professional Edition includes Norton Utilities tools to monitor your computer for potential problems, examine your disk for directory and disk problems, and diagnose Windows problems.

Norton System Doctor continuously monitors your computer to keep it running at peak efficiency. If directory, disk or Windows problems occur, you can diagnose and fix these problems quickly using Norton Disk Doctor and Norton WinDoctor.

The Norton SystemWorks Professional Edition *bootable* CD does not support running Norton Disk Doctor on NTFS *partitions* or FAT16 drives with 64 KB clusters (available in Windows 2000/XP only). If you need support for this capability, install the complete Norton Disk Doctor package on your computer.

About Norton Utilities alerts

See "Monitor your computer's health" on page 145.

When one of the Norton Utilities tools detects a problem with your computer, it displays a message. These messages, called *alerts*, may appear when you are running other programs and Norton Utilities detects a problem.

For example, if Norton System Doctor finds a problem, it displays an alert. Normally Norton System Doctor notifies you of a problem by displaying a red light sensor. Alerts do not appear unless you set the sensor properties to Display Alarm Message.

Use System Information

No matter what your level of computer expertise, difficult questions about your computer's configuration will arise. For example, when you have a problem installing new hardware or software and you call the manufacturer for technical support, you may be asked questions about your computer's BIOS, bus type, processor, ports, video and multimedia capabilities, or memory capacity. Having access to this information is useful.

System Information gives you quick and easy access to information about your computer. It provides technical details about:

- System configuration (processor, BIOS, bus type, memory, and more)
- Display (video *driver*)
- Printers and printer ports
- Physical and virtual memory
- Disk drives
- Input devices (keyboard and mouse or other pointing device)
- Multimedia devices
- *Network* connections

This information can be saved to disk or printed.

To use System Information

1. In the Norton SystemWorks Professional Edition main window, click **Norton Utilities** > **System Maintenance** > **System Information**.
   System Information gathers information about your computer and displays it in the System Information dialog box.
   Computer information is displayed on the tabs of the System Information dialog box. You can print the information on one tab or on the entire inventory.
2. Click each tab to view the information for that tab.
3. When you have finished viewing the information, click **Close**.

For network, CD, and compressed drives, the Disk Usage Selection on the Drive tab is the total size of all selected items as reported by the file system. This does not include space wasted due to the device's cluster size. The total amount allocated is often slightly more than the size displayed by System Information. These snapshots of your system are helpful when you call a vendor for technical support.

See "Use online Help" on page 94.

For more information, see the online Help.

Monitor your computer's health

Norton System Doctor continuously monitors your computer to keep it free of problems and running at peak efficiency. It alerts you immediately when conditions require attention and fixes many problems automatically, without interrupting you.

See "Set Norton System Doctor startup options" on page 147.

The Norton System Doctor main window contains a panel of sensors that monitor many aspects of your computer, including the disks, memory, CPU, and network. Norton System Doctor sensors include alarms that alert you to critical conditions requiring attention. The sensors also provide information that helps you to fine-tune your computer's performance.

While the default settings are ideal for most users, Norton System Doctor is completely customizable.

See "Use online Help" on page 94.

For more information, see the online Help.

Add or remove sensors

See "Set Norton System Doctor startup options" on page 147.

The Norton System Doctor Disk Health sensor is set to monitor all *local* hard disks by default. If you want to monitor additional system functions, you can add them. For example, you can add the WinDoctor sensor to have it run continuously.

If you are using Windows 98/Me and a sensor is set to Monitor All Local Hard Drives, there should be no more than one instance of that sensor in the Norton System Doctor sensor panel.

To add or remove sensors

1. In the Norton SystemWorks Professional Edition main window, click **Norton Utilities** > **Find and Fix Problems**.
2. Click **Norton System Doctor**.
3. On the View menu, click **Options**.
4. In the Norton System Doctor Options dialog box, click **Active Sensors**.

5 On the Active Sensors tab, make sensors active or inactive. Your choices are:

Add a sensor	In the Available Sensors list, select a sensor, then click **Add**.
Remove a sensor	In the Current Sensors list, select a sensor, then click **Remove**.

6 Click **OK**.

Reset sensors to improve performance

Some Norton System Doctor sensor settings may affect computer performance. Depending on your operating system and other factors, you may have to reset some Norton System Doctor sensors to improve system performance. The following list describes situations and sensors that are more likely to affect performance:

- If you notice a decrease in a drive's performance while Norton System Doctor is monitoring it, decrease the frequency with which Norton System Doctor monitors that drive.
- The Rescue Disk and WinDoctor sensors are system wide and not drive specific. Only one of each should be active at any time.
- If you have the Always on Top option disabled and Norton System Doctor is docked, you cannot move windows past the area that it occupies.
- The Disk Health sensor continually checks the disk to ensure that it is running optimally. However, in Windows Me, the Disk Health sensor prevents the Windows Me System Restore function from running. To enable Windows Me System Restore, disable the Disk Health sensor.
- If you connect to an Internet service provider (*ISP*) such as Prodigy Internet or America Online using *dial-up networking*, do not enable the Internet sensors in Norton System Doctor. ISPs that use dial-up networking do not disconnect properly if they detect another application using the Internet connection. This could cause your Internet connection charges or your telephone bill to be higher than expected.
- If you are running without adequate permissions or privileges, certain information reported in Windows 2000/XP may not be available or may be incorrect.

To reset Norton System Doctor sensors

1 Start Norton System Doctor.

See "Add or remove sensors" on page 145.

2 In the Norton System Doctor Window, select a sensor.

3 On the Edit menu, click **Reset**.

After correcting a problem indicated by a Norton System Doctor sensor, some stoplight sensor faces might not update immediately to indicate that the condition is resolved. If this happens, right-click the sensor, then click Update.

See "Use online Help" on page 94.

For more information, see the online Help.

Set Norton System Doctor startup options

To take full advantage of the monitoring capabilities of Norton System Doctor, leave it running all the time. You can also specify whether you want Norton System Doctor to automatically start when Windows starts.

While the default settings are ideal for most users, Norton System Doctor is completely customizable. You can do the following:

- Specify the conditions that Norton System Doctor monitors by adding and removing sensors.
- Select the critical conditions that you want Norton System Doctor to fix automatically.
- Run Norton System Doctor minimized or docked to preserve desktop space.

To set Norton System Doctor startup options

1 In the Norton SystemWorks Professional Edition main window, click **Norton Utilities** > **Find and Fix Problems**.

2 Click **Norton System Doctor**.

3 On the View menu, click **Options**.

4 In the Norton System Doctor Options dialog box, on the Window Settings tab, in the Startup Options group, select any of the following:

Start Automatically with Windows	Norton System Doctor starts automatically the next time Windows starts.
Start Minimized	The Norton System Doctor main window is minimized when it is started.

About disk and Windows errors

Trouble-free computing depends on the integrity of your computer. This integrity is based on an error-free hard disk and a correctly installed copy of Windows. Both Windows and your hard disk can develop errors as you use your computer. If they are not corrected, the accumulation of errors can lead to data loss.

See "Monitor your computer's health" on page 145.

The best cure for any problem is prevention. If you keep Norton System Doctor running at all times, it spots problems early and recommends corrective action.

Norton SystemWorks includes several tools that help you identify and repair disk and Windows problems:

- One Button Checkup
  See "When to use One Button Checkup" on page 148.
- Norton System Doctor
  See "Set Norton System Doctor startup options" on page 147.
- Norton Disk Doctor
  See "When to use Norton Disk Doctor" on page 148.
- Norton WinDoctor
  See "When to use Norton WinDoctor" on page 149.

When to use One Button Checkup

Some scans in One Button Checkup provide an alternative to the monitors in Norton System Doctor. Norton System Doctor monitors a wider variety of conditions and remains in your computer memory. One Button Checkup runs scans when you start them manually or when you schedule them. If you have a particular condition that you want to monitor continuously, use Norton System Doctor.

When to use Norton Disk Doctor

Norton System Doctor includes Norton Disk Doctor and Surface Test sensors that notify you when a potential disk problem is detected. Norton Disk Doctor runs automatically to diagnose the problem and make immediate repairs.

Norton Disk Doctor performs several tests on the disk, checking everything from the *partition* table to the physical surface. If Norton Disk Doctor finds a problem, it notifies you before making repairs. If you set Norton Disk

Doctor to automatically fix errors, repairs are made automatically. After diagnosing and repairing a disk, Norton Disk Doctor displays a report that lists the problems found, the problems fixed, and the areas of the disk that are problem-free.

When not to use Norton Disk Doctor

Do not run the *DOS* version of Norton Disk Doctor on partitions that were created with Linux FDISK or Disk Druid. If you choose to fix errors on partitions that were created with these utilities, it is critical that you make an undo disk.

See "Create and use Rescue Disks" on page 70.

Use Norton Disk Doctor to fix an invalid partition only if it is completely inaccessible from Windows or DOS. Update your Rescue Disks prior to any kind of partition repair operation.

Norton Disk Doctor can only revive FAT or FAT32 partitions on computers running Windows 2000/XP. It cannot revive NTFS partitions.

To repair corrupted *boot records*, use the DOS version of Norton Disk Doctor; do not use the Windows version. The Windows version diagnoses the problem, but will not repair the boot record as well as the DOS version of Norton Disk Doctor.

When to use Norton WinDoctor

Norton WinDoctor is the safe and easy way to diagnose and repair common Windows problems. It checks the necessary information for Windows to run properly and checks for components needed by programs that run in Windows.

Combined with Norton System Doctor, Norton WinDoctor can automatically monitor your computer for Windows problems. If a problem is detected, Norton System Doctor alerts you to start Norton WinDoctor to correct it.

Check your disk with Norton Disk Doctor

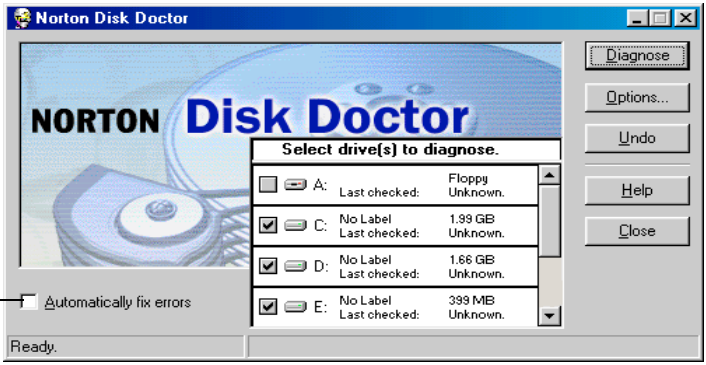
Run Norton Disk Doctor often to keep your hard disk free of accumulated errors.

Running Speed Disk frequently will improve the performance of the scans that Norton Disk Doctor conducts. However, if you suspect that your disk has problems, do not run Speed Disk until you have corrected them with Norton Disk Doctor.

To perform a disk check

1 In the Norton SystemWorks Professional Edition main window, click **Norton Utilities** > **Find and Fix Problems**.

2 Click **Norton Disk Doctor**.



If you want Disk Doctor to fix all errors automatically

3 In the Norton Disk Doctor dialog box, select one or more drives to diagnose.

4 If you want Norton Disk Doctor to repair problems automatically without stopping to describe them to you, check **Automatically fix errors**.

See "Customize Norton Disk Doctor" on page 154.

5 If you want to specify which tests Norton Disk Doctor runs and other options, click **Options** and set the options you want.
Norton Disk Doctor run-time options are different depending on whether you are running in Windows 98/Me or in Windows 2000/XP. Refer to Help for more information.

6 Click **Diagnose**.
Norton Disk Doctor restarts its diagnosis if it detects that another program is writing to the examined disk. Restarting ensures the integrity of the data on the disk if repairs are required. Restarting may occur several times during a single Norton Disk Doctor session.

7 Follow the on-screen instructions as Norton Disk Doctor identifies and fixes any problems.

8 When the diagnosis and repairs are complete, click **Close**.

Norton Disk Doctor lets you check your disk for problems with utilities on the CD.

To examine your disk using the CD utilities

See "If the CD window does not appear" on page 47.

1. Insert the Norton SystemWorks Professional Edition CD into your CD-ROM drive.
2. In the Norton SystemWorks Professional Edition CD window, click **Launch Utilities From CD**.

Do not click Install Norton SystemWorks. If you are trying to repair a damaged disk, installing Norton SystemWorks might overwrite information on your hard disk.

3. In the CD Utilities window, click **Norton Disk Doctor**.
4. In the Norton Disk Doctor window, select the drives that you want to diagnose.
5. Change any other settings for the examination.
   If you are examining a disk for a specific problem, you can reduce the number of tests that Norton Disk Doctor normally performs.
6. Click **Diagnose**.
   Norton Disk Doctor examines the selected disk.
7. Follow the on-screen instructions as Norton Disk Doctor identifies and fixes any problems found on your disk.
8. When the examination and repairs are complete, click **Close**.
9. Close the CD Utilities window.
10. Close the Norton SystemWorks Professional Edition CD window.
11. Remove the CD from your CD-ROM drive.
12. Restart your computer.

Run Norton Disk Doctor in the background

In Windows 98/Me, you can run Norton Disk Doctor in the background while you work by minimizing it after clicking Diagnose. When Norton Disk Doctor detects a pause in disk activity, it begins diagnosing the disk. (In Windows 98/Me, one of the Norton Disk Doctor advanced options lets you specify how long a pause is required.)

See "Monitor your computer's health" on page 145.

Norton Disk Doctor diagnoses your disk only once each time it is run minimized. To continuously test the integrity of your disk, use Norton System Doctor. The Disk Doctor and Surface Test sensors can monitor your disk while you work. When problems are detected, Norton System Doctor can run Norton Disk Doctor immediately.

Create an Undo file to reverse repairs

In Windows 98/Me, Norton Disk Doctor gives you the option of creating an Undo file before making disk repairs. In the unlikely event you need to reverse the changes made by Norton Disk Doctor, you can use the undo file to return your disk to the state it was in prior to the repairs.

By default, Norton Disk Doctor prompts you to create an Undo file before making any repairs. If you do not want Norton Disk Doctor to create an undo file, uncheck the Undo File option in the Custom Repair Options window. Turn off the undo prompts only if you are certain you will not need to undo the repairs.

To create an Undo file

See "Check your disk with Norton Disk Doctor" on page 149.

1. Start Norton Disk Doctor and examine a disk.
   When Norton Disk Doctor finds a problem that must be repaired, it describes the problem and asks if you want to save an Undo file.
2. In response to the Norton Disk Doctor prompt, click **Create Undo File**.
3. In the Select Undo Location dialog box, select a drive on which to create the Undo file, then click **Create**.
   It steps you through this process.
4. Follow the on-screen directions to specify the Undo file location.

You should inspect any data files affected by the repairs (they are indicated in the Norton Disk Doctor report). If you are not satisfied with the results of the repair, click **Undo** immediately. You should not try to undo the changes if you have saved, deleted, or copied files following the repairs. Attempting to do so may result in a loss of data.

If you need to reverse a repair

You can reverse a previously made disk repair if you authorized Norton Disk Doctor to create an Undo file when the previous examination was made.

If you have copied, saved, or deleted files on your disk after making repairs with Norton Disk Doctor, do not attempt to undo the repairs. Changes to the file system after the repairs invalidate the Undo file data. Attempting to undo repairs after you have changed files on your disk can result in lost or damaged data. Also, do not attempt to undo changes if Norton Disk Doctor reported any disk surface errors.

To undo Norton Disk Doctor repairs in Windows 98/Me

1. Click **Undo** in the main window.
2. Read the confirmation message. If you still want to attempt to undo your repairs, click **Continue**.
3. Choose the drive containing the Undo file and click **OK**.
4. Verify that the undo information found was created at the correct date and time and click **Yes**.

About the Norton Disk Doctor report

When Norton Disk Doctor finishes testing your disk for errors, it displays a summary of test results, including any problems that were found, and whether repairs were made.

You can also view and print a more explicit report that includes detailed information about the examined disk and the repairs that were made. The detailed report can help you track recurring disk problems.

The Norton Disk Doctor report is not available if you are using a version of Norton Utilities that is in a different language than your operating system.

To create Norton Disk Doctor test results

See "To perform a disk check" on page 150.

1. Examine a disk with Norton Disk Doctor.
2. In the Test Results dialog box, click **Details**.
3. Specify the output type for the test results. Your options are:

Print to Printer	Print the report to the printer that you select. To specify printer options, click the open folder icon.
Print to File	Save the test results in a text file with the name and location that you specify. To specify a file name, click the open folder icon.

Types of Norton Disk Doctor tests

Norton Disk Doctor checks your disk's physical surface for abnormalities that would affect the data storage on your disk. Norton Disk Doctor moves any data it can from damaged areas of the disk to undamaged areas. It also marks the damaged areas so that your computer won't attempt to store data there in the future.

See "Use online Help" on page 94.

For more information, see the online Help.

Customize Norton Disk Doctor

In Norton Disk Doctor you can customize how repairs are handled, if Norton Disk Doctor runs a disk check on startup, its appearance during disk examinations, how thoroughly to examine a disk, and what tests should be run or skipped.

To customize Norton Disk Doctor

1. In the Norton SystemWorks Professional Edition main window, click **Norton Utilities > Find and Fix Problems**.
2. Click **Norton Disk Doctor**.
3. In the Norton Disk Doctor main window, click **Options**.
4. Click a tab to adjust the associated options.
   For more information, see the online Help.
5. When you're finished, click **OK**.

Find and fix Windows problems

Norton WinDoctor is the safe and easy way to diagnose and repair the most common types of Windows problems. You can tailor the repair process to your own needs, by selecting which tests to run and which problems to fix.

Norton WinDoctor does the following:

- Inspects everything that's required for Windows to run properly, and keeps Windows running at peak efficiency.
- Checks for components needed by the programs you run under Windows.
- Displays an easy-to-read report that lists the problems it found, the problems it fixed, and the severity of each problem.
- Lets you tailor the repair process. You can specify which problems to fix and how to fix them. Or, you can just choose to fix all found problems automatically and let Norton WinDoctor take care of everything.

Run Norton WinDoctor when you receive a Windows problem alert, or run it regularly to keep your Windows operating system free of accumulated errors.

To find and fix Windows problems using Norton WinDoctor

1 In the Norton SystemWorks Professional Edition main window, click **Norton Utilities** > **Find and Fix Problems**.

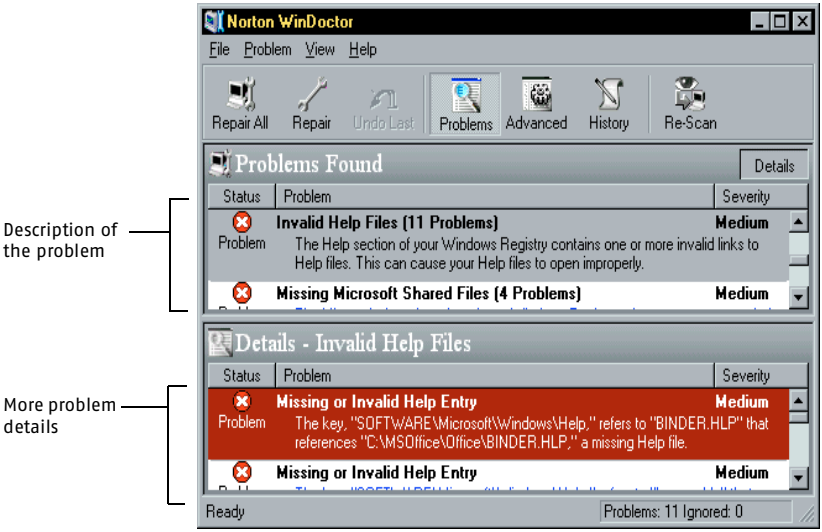
2 Click **Norton WinDoctor**.
Your choices are:

Perform all Norton WinDoctor tests	Performs all available scans without further interruption.
Let me choose which tests to run	Displays a list of scans that you can exclude or include.
View Repair History and (optionally) undo changes	Lets you review and reverse Norton WinDoctor's previous repairs.

3 Ensure that Perform all Norton WinDoctor tests is selected, then click **Next**.

4 When the scan is finished, click **Next**.

5 To see the list of problems, click **Finish**.



6 Do one of the following:
   - To correct all problems, click **Repair All**.
   - To repair a specific problem or group of problems, select the problem or group of problems, then click **Repair**.
7 Click **OK**.
8 Close the Norton WinDoctor window.

Norton WinDoctor can create a log file of all the changes made to Windows.

To have Norton WinDoctor create a log file

1 With the Norton WinDoctor Problems Found dialog box open, press **Ctrl+Alt+S** to open a Save dialog box.
2 Save the log to a text file.

Select Norton WinDoctor scans

Norton WinDoctor can perform a variety of scans to find problems with your system. You may not wish to run every scan every time you run Norton WinDoctor. When you start Norton WinDoctor, the program displays a list of available scans and allows you to select the ones that you want Norton WinDoctor to run.

To select Norton WinDoctor scans

See "Find and fix Windows problems" on page 154.

1 Start Norton WinDoctor.
2 Select **Let Me Choose Which Tests To Run**.
3 Click **Next**.
4 Check the scans that you want to run.
5 Click **Next**.
6 To specify how you want Norton WinDoctor to process the problems it finds, click **Analysis Agents**.
7 In the Analysis Agents dialog box, select the agents that you want to use. Your options are:

Norton WinDoctor scan check box list	Click any check box to uncheck it, disabling that scan. To see information about each scan, place your cursor over it and read the tooltip that displays.

Deselect all/Select all	Deselects or selects all the available scans.
Analysis Agents	Click to open the Select Analysis Agents dialog box where you can specify how you want Norton WinDoctor to process the problems it finds.

To view Norton WinDoctor test results

1. Follow the on-screen instructions to run Norton WinDoctor tests for problems.
2. Click **Finish**.
   Norton WinDoctor displays a list of the problems found organized by problem type in order of severity.
3. To see the individual problems for each problem type select one type and click the Details button.

To limit the scan to specific problem types

1. Start Norton WinDoctor.
2. Select **Let Me Choose Which Tests To Run**.
3. Click **Next**.
   A checklist of Norton WinDoctor scans displays.
4. Click the boxes to select the scans you want to run.
5. Click **Next**.
6. To specify how you want Norton WinDoctor to process the problems it finds, click **Analysis Agents**.

To disable WinDoctor Analysis Agents

1. Start Norton WinDoctor.
2. Select **Let Me Choose Which Tests To Run**.
3. Click **Next**.
4. Click **Analysis Agents**.
5. Uncheck one or more problem Analysis Agents and click **OK**.
6. Continue the scan process.
7. To see information about each Analysis Agent, place your cursor over it and read the tooltip that displays.

Select repair solutions

Norton WinDoctor lets you tailor the repair process to your own needs. You can specify which problems to fix and how to fix them, or you can let Norton WinDoctor fix all found problems automatically.

If you decide you don't like a repair Norton WinDoctor has made, you can undo it. To undo repairs you made in previous sessions, use Norton WinDoctor's Repair History feature.

The Automated Repair dialog box displays one sub-problem at a time, and presents the available solution methods to repair it. The first solution in the list is the most complete fix for the problem. You may select other solutions or accept the recommendation. The Automated Repair dialog box contains the following:

Select Solution list	Select the solution you want applied to the problem.
Repair	Click Repair to apply the selected solution.
Cancel	If you selected a problem type with multiple sub-problems, or a group of sub-problems, Cancel allows you to skip the currently displayed sub-problem and display the next, or close this dialog box.

About problem severity

Norton WinDoctor displays an easy-to-read report of the problems it found. Problems are listed by problem type in the order of severity.

There are three levels of severity:

Low	A problem that is unlikely to affect your use of the computer, but should be repaired to keep your system uncluttered. For example, you may have a reference to a file in the registry that points to a file that has been moved or deleted.
Medium	A problem that would be an annoyance to you, but probably won't interfere with the most important tasks you perform. For example, if an application shortcut refers to a file that is missing or has been moved, you would not be able to launch that application from the shortcut.
High	A problem that can block you from using your computer or could result in data loss. For example, if a file that is required to run an application is missing or corrupt.

Recovering missing or erased files

11

Do not use UnErase if you purchased Norton SystemWorks to recover files or because you suspect that your computer is infected with a virus. Before you proceed, read the emergency procedures. See “Emergency procedures” on page 21.

When you erase a file using Windows Explorer, Windows keeps a temporary copy of the file in the Recycle Bin. However, Windows does not detect files that were erased or overwritten by applications running in Windows, erased from a command prompt, or deleted via a permanent method, such as using Shift+Delete.

About Norton Protection

The Norton Protected Recycle Bin protects the following types of files:

- Files that are deleted while you are using the command line
- Files created and deleted by Windows applications
- Older versions of files that you modify and overwrite
- If the standard Windows Recycle Bin is not enabled, Norton Protection also protects files that would otherwise be under Recycle Bin protection

Files shared on a network or stored on a network server and files deleted while using your computer in DOS mode rather than Windows are not protected.

To configure Norton Protection

1. On the Windows desktop, right-click the **Norton Protected Recycle Bin**, then click **Properties**.
2. On the Norton Protection tab, make sure that Enable Protection is checked.
3. On the Recycle Bin tab, select the item to open when the Recycle Bin icon is double-clicked.
   Use the context-sensitive Help to view more options in the Norton Protected Recycle Bin.

See "Use online Help" on page 94.

If you start your computer in DOS mode, you may find that DOS reports less free disk space than expected. This discrepancy is because DOS does not deduct the space used by deleted files protected by Norton Protection.

About UnErase Wizard

UnErase Wizard helps you recover deleted files from the Norton Protected Recycle Bin. In Windows 98/Me, UnErase Wizard can also help you restore files that were unprotected by Norton Protection. Windows 2000/XP can only recover files if Norton Protection is turned on.

UnErase Wizard also helps you recover files that are deleted from the standard Windows Recycle Bin, or Novell's Salvage (for recovery of files on a network). In Windows 98/Me, UnErase Wizard frequently recovers unprotected files as well, even those deleted from the Recycle Bin.

If you have a dual boot system and the volume containing deleted files is not NTFS, you can use the Windows 98/Me version of UnErase Wizard to recover deleted files.

See "Recover a file with UnErase Wizard" on page 162.

Using UnErase Wizard, you can search for a deleted file by its file name and by words that you think the file may contain. This is especially useful if you can't remember the file name, but you do remember its contents.

Recover a file with UnErase Wizard

If you have excluded files from Norton Protection and these excluded files are deleted, they are not intercepted by the Windows Recycle Bin or Norton Protection and therefore are not recoverable on Windows 2000/XP systems.

In Windows 98/Me, installing Norton SystemWorks Professional Edition can overwrite erased files on your hard disk. If you want to try to recover erased files before you install, you should run UnErase Wizard from the Norton SystemWorks Professional Edition CD. See "To start utilities from the CD" on page 62.

UnErase Wizard displays a list of deleted files or the files that conform to file name criteria that you provide. Each file is described by its name, original location, the date it was deleted, *file type*, file size, and the program that was used to delete it. You can view the contents of a file before or after you recover it.

To recover a file with UnErase Wizard

1. In the Norton SystemWorks Professional Edition main window, click **Norton Utilities** > **Find and Fix Problems**.
2. Click **UnErase Wizard**.
3. In the UnErase Wizard dialog box, select the action that you want to take. Your options are:

Find recently deleted files	Searches for the names of the most recently deleted files and displays up to a maximum of 25 deleted files (Windows 98/Me only).
Find all protected files on local drives	Searches for and displays the names of all deleted files that are protected by Norton Protection or the Windows Recycle Bin on your computer.
Find any recoverable files matching your criteria	Prompts you for search criteria. Use this option if you are looking for words that are contained in a deleted file.
Find all Norton Protected Users files	Searches for other users' protected files as well as your own. (This option is available only in Windows 2000/XP.)

4. Click **Next**.
   UnErase Wizard displays a list of the most recently deleted files.
5. Select the file that you want to recover.
6. Click **Recover**.
   If you want to examine the recovered file, make a note of the recovery destination.

7 If you are using Windows 98/Me and your deleted file is not listed, click **Next**.
UnErase Wizard guides you through the process of creating a more complete list of deleted files from which to select.

8 To close UnErase Wizard, click **Finish**.

If you delete a file on a floppy disk from a DOS prompt by specifying file name letters after a wildcard (such as DEL *ILENAME.TXT as opposed to DEL FILENAME.TXT or DEL *.TXT), the file is listed as unrecoverable on the Recently Deleted Files page.

To see if a file is recoverable

1 In the center of the file list, right-click, then click **Show Unrecoverable Files**.

2 Click **Next**.

3 Use the UnErase Wizard pages to search for and recover the files.

Improving a computer's performance

12

Your computer's hard disk stores all of your files, applications, and the Windows operating system. Over time, the bits of information that make up your files are spread over the disk. This is known as fragmentation. The more you use your computer, the more fragmented it gets. Before long a fragmented hard disk can cause the entire system to slow down.

Speed Disk defragments the bits of information on your hard disk and rearranges them for greatest efficiency in a process called optimization.

About Speed Disk

Speed Disk optimizes an entire disk's files, directories, the MFT, swap file, and security meta data. You can optimize without restarting your computer and optimize in only one pass, even after optimizing the swap file. Intelligent analysis places *file types* in the optimal order for best performance, reducing the frequency and necessity for substantial reoptimizations.

Use the Disk Optimization sensor in Norton System Doctor to monitor your disks' fragmentation levels. When disks become too *fragmented*, Norton System Doctor can run notify you to run Speed Disk.

Why performance degrades

A hard disk is a set of stacked disks onto which data is recorded in concentric tracks. A disk head is like a phonograph arm but in a more fixed position. As the disk spins, two disk heads (one on each side of the disk)

write to or read the information on the tracks. How and where your data is organized on your disks affects your computer's performance.

All of your files, applications, and the Windows operating system are stored on your computer's disks. Over time, the bits of information that make up your files gets distributed all over the disk. This is known as *fragmentation*. Fragmentation creates inefficient conditions when you want to store and retrieve information on or from a disk. The more that you use your computer, the worse it gets. A fragmented disk can cause the entire computer to slow down.

Over time, fragments of a file may be scattered in different areas of the disk, away from the original location of the file. These multiple file fragments are tracked in the disk catalog, or Master File Table (MFT), which also grows with the addition of location information.

How fragmentation is calculated

In Windows 2000/XP, the fragmentation level is determined by the formula [total file fragments]/[number of files], expressed as a percentage. Unfragmented files are counted as single *fragments*. You may also see different statistical reporting with Executive Software's Diskeeper, or Disk Defragmenter, the utility that is included with Microsoft Windows.

In Windows 98/Me, Speed Disk compares the number of fragments against the number of files using the formula (Tf / F) * 100 where Tf = number of file fragments and F = total files. For example, on a disk with 100 files, with one file consisting of 17 fragments, Speed Disk will report that 17 percent of the disk is fragmented. Speed Disk also defragments the swap file and includes it in its calculations.

How fragmentation affects performance

The data storage space on a disk is divided into discrete units called clusters. When files are written to the disk, they are broken up into cluster-sized pieces. When all the pieces of a file are located in adjacent or contiguous clusters, the file can be accessed quickly because all of the information is in one place.

When files are saved or copied to a disk, there is no discrimination among types of files. On an unoptimized disk, all *file types*, including applications, .dlls, and data files, are intermingled.

When a fragmented file is accessed, disk performance is slower because the drive head must do more work to locate, load, save, and keep track of all of the *fragments* of the file. If free space is also fragmented, the disk head may have to hunt for adequate free space to store temporary files or newly added files.

Free space fragments that are smaller than 16 clusters cannot be used by the Windows 2000/XP File System so these fragments waste drive space. If there is substantial fragmentation on the drive, unavailable free space can consume a lot of potential drive space.

Fragmentation also affects video and other multimedia performance. For example, if a multimedia file such as a movie is being played, and the movie file is fragmented, the player may have to wait for the disk head to locate the next fragment to load.

Speed Disk optimizes fragmented files by rearranging file fragments into adjacent or contiguous clusters. When the disk head can access all of the file data in one location, the file is read into memory faster.

About file fragmentation

The space on a drive is divided up into discrete units for allocating file space. The Windows 2000/XP NTFS file system uses *clusters* as its smallest allocation unit. When files are stored to the drive, they are broken up into cluster-size pieces that are tracked in a disk catalog. Cluster sizes vary depending on the overall size of the drive.

Cluster allocation size	Drive size
512 bytes	<512 MB
1024 bytes	512 MB to 1 GB
2048 bytes	1 GB to 2 GB
4096 bytes up to 128 KB	>2 GB

Speed Disk also creates contiguous free space on the disk, improving system performance when you add new files. This is especially helpful under low disk space conditions where free space fragmentation can cause newly added large files to be fragmented from the start.

Differences between optimization and defragmentation

The terms defragmentation and optimization are often used interchangeably, but they are not the same.

Defragmentation is the process of rearranging the way files are organized on a disk so that the data comprising each file is stored in adjacent or contiguous disk clusters.

Optimization maximizes the usable free space on a disk by grouping files based on how they are accessed. The most frequently used files are placed at the beginning of the disk for fast access. Infrequently used files are placed out of the way. Free space is consolidated to avoid fragmenting newly added files, and extra space is added after major data structures so they can grow without immediately becoming fragmented again.

Before optimizing your disks

Before running Speed Disk, prepare your computer for optimization. This includes running the Windows CHKDSK utility (if necessary), deleting temporary files, completing any major software installations or removals, backing up your files, closing all programs, and setting the Speed Disk options that are appropriate for your computer.

If you are optimizing for the first time

See "Specify file placement during optimization" on page 177.

A disk's first optimization may take significantly longer than subsequent optimizations because Speed Disk must move the files and free space in a particular order. After a disk has been optimized, only new and expanded files need optimization.

See "Customize Speed Disk" on page 176.

If optimization is taking too much time, or using too many computer resources, you may want to adjust the Speed Disk options.

The benefits of optimization, which include faster access and improved overall performance, make the initial optimization time worthwhile. Speed Disk takes advantage of improvements made in the first optimization to reduce subsequent optimization time.

If you are optimizing NTFS volumes

If you are optimizing NTFS volumes, check the Speed Disk Global Options that run CHKDSK on an NTFS volume before proceeding. If the current disk

is a FAT volume, a dialog box appears requesting that Norton Disk Doctor be run before the optimization.

Prepare your computer

Before running Speed Disk, you need to prepare your computer. Take the following steps:

Step	For more information
Back up your files.	Refer to your system documentation.
Delete temporary files.	Refer to your system documentation.
Complete any program installations or uninstallations.	See "If you are optimizing for the first time" on page 168. For any special considerations, refer to your system documentation.
Run Norton Disk Doctor or CHKDSK.	See "If you are optimizing NTFS volumes" on page 168.
Analyze disk fragmentation (Windows 2000/XP).	See "Analyze disk fragmentation" on page 175.
Set Speed Disk options.	See "Customize Speed Disk" on page 176.
Close all programs (Windows 98/Me).	Refer to your system documentation.

Optimize disks

If you followed the suggestions listed in "Before optimizing your disks" on page 168, you are ready to optimize a disk for the first time. Windows 98/Me optimization procedures are different than Windows 2000/XP procedures.

On disks with more than 6000 folders or folders with more that 2000 large files (files larger than 5MB), the initial Speed Disk scan will run very slowly and may even appear to stop. You should always allow the scan to complete.

About the phases of optimization

Speed Disk goes through the following phases in the course of optimization:

Scan for errors before optimizing NTFS volumes (optional)	When this setting in the Global Options is turned on (the default setting is off), Speed Disk runs a brief check of the drive for any problems. To change this setting, on the View menu, click Global Options and check Scan For Errors Before Optimizing NTFS Volumes. If problems are found, you are prompted to run the Windows CHKDSK command to reclaim lost chains and repair any disk damage.
Scanning	Speed Disk scans the entire hard disk and gathers information about how many files of each file type are present, the amount of empty space, and the number of partially used clusters. Gathering data on file fragmentation and unmovable files can take some time, depending on the size of the volume, the number of files on the volume, and the degree of file fragmentation. Unmovable files are distinguished in the optimization map after the drive is scanned in the first phase of optimization. However, to save time, the map does not distinguish fragmented or unmovable files until after Speed Disk performs a fragmentation analysis.
Sorting	Speed Disk sorts the files according to the types described in "File placement during optimization" on page 171.
Moving	Speed Disk moves the files into the areas of the drive assigned to their types, as described in "File placement during optimization" on page 171.

File placement during optimization

Speed Disk places files in order, from the beginning of the drive to the end of the drive. In general, the default settings will provide the best performance. You should change the default settings only if your files require special consideration. File types are placed in the following order.

Drive order	File type
Start	Master File Table (MFT)
2	Files in the Files First list in Drive Options
3	Paging File
4	Directories
5	Files accessed in the last 2 months
6	Files optimized by Speed Disk
7	Files modified within the last 2 to 4 months
8	Files modified within the last 2 months
9	Files not accessed in the last 2 months
10	Files not modified in the last 4 months
11	Files in the Files Last list in Drive Options
12	Optimized free space
–	Extra space placed after data files to allow for growth
–	Files and other disk data not yet optimized
13	Files in the Files At End list in Drive Options

Start Speed Disk

When you use Speed Disk, you select the drives. Speed Disk checks the disk for errors before optimization proceeds.

To optimize a disk in Windows 2000/XP

See "Access Norton SystemWorks tools" on page 55.

1. In the Norton SystemWorks Professional Edition main window, click **Norton Utilities** > **Optimize Performance**.
2. Click **Speed Disk**.

3 In the Speed Disk dialog box, under Select a Drive, select the disk that you want to optimize (the default disk is C).

4 Under Select a View, select the options that you want. Your choices are:

Optimization Map	Lets you optimize disks. When optimization starts, the drive map shows how Speed Disk organizes file types, which are colored according to the legend. See "About the optimization map" on page 174.
Analysis	Lets you generate statistics about a selected disk. See "Analyze disk fragmentation" on page 175.
Drive Options	Lets you customize file placement on a disk. See "Customize Speed Disk" on page 176.
Schedule Options	Lets you set an optimization schedule for each disk. See "Schedule optimization" on page 178.
Legend	Lists the file types represented by the colors in the drive map. See "About the optimization map" on page 174.

5 Click **Start Optimizing**.

6 If you selected Analysis, click **Start Analyzing**.

To optimize a disk in Windows 98/Me

1 In the Norton SystemWorks Professional Edition main window, click **Norton Utilities** > **Optimize Performance**.

2 Click **Speed Disk**.

3 In the Speed Disk dialog box, under Select a Drive, select the disk that you want to optimize (the default disk is C).
Speed Disk scans the disk and makes a recommendation based on the current fragmentation.

4 Select an optimization option. Your choices are:

Full Optimization	Defragments and optimizes the files and consolidates the free disk space to one area on the disk. This method gives the best results, but takes the longest. If you select this method, you can also customize how the optimization is performed.
Unfragment Files Only	Optimizes as many files as possible without consolidating the free disk space. This method is faster than a full optimization, but may not optimize as many files as efficiently. Some large files may not be optimized at all.
Unfragment Free Space	Quickly consolidates the free space to one area of the disk, but does not optimize any files. Use this method before installing new software or creating a compressed volume if you don't have time for a full optimization.

5 Check or uncheck **Optimize Swap file**.

6 Disable the Microsoft Task Scheduler if desired.

7 Click **Start**.
You can view Speed Disk progress on the disk optimization map. When Speed Disk has finished optimizing, a message appears.

8 Click **OK**.

9 Close the Speed Disk window.

Run Speed Disk in the background

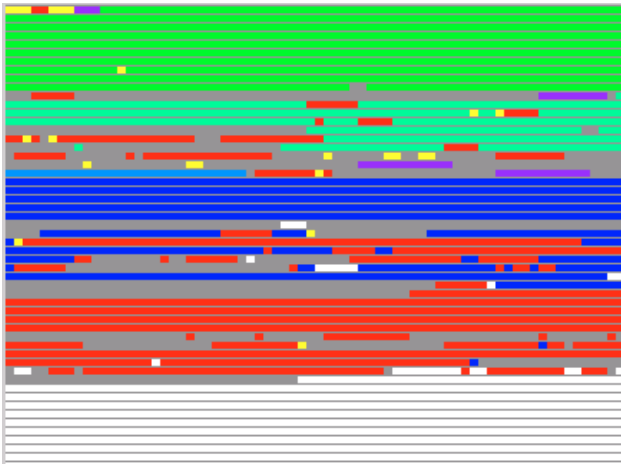
You can run Speed Disk efficiently in the background while you work by minimizing it after starting the optimization. When Speed Disk detects a pause in disk activity, it begins optimizing the disk.

You can specify how long a pause in disk activity is necessary before Speed Disk begins optimizing in the background. You can also configure Speed Disk to wait for a specified time period of communication port inactivity before beginning background optimizations. If you are using fax software to send and receive faxes, you should enable this feature to avoid conflicts between the fax software and Speed Disk.

Norton System Doctor includes the Disk Optimization sensor, which can automatically monitor a disk while you work and notify you when the files become too fragmented. You can configure Norton System Doctor to run Speed Disk automatically when fragmentation exceeds a specified value.

About the optimization map

The optimization map is a graphical representation of the files arranged on a disk. The customizable color-coding helps you identify how efficiently disk space is being used. Each block on the map represents a number of clusters on the drive.



Each color represents a file category

On the optimization map, you may see small blocks of extra space mixed in with optimized files, even after Speed Disk has optimized a disk. Speed Disk adds extra space after each category of optimized files to allow for future growth. This allows categories of files to expand without causing immediate fragmentation and extends the benefits of optimization.

In Windows 98/Me, you can click on any block in the disk map to display information about the block location, files that occupy that cluster, and whether a file is fragmented, optimized, or unmovable.

See "Use online Help" on page 94.

For more information about the Optimization Map, see the online Help.

About the Analysis View

In Windows 2000/XP, Speed Disk displays an analysis of each drive so you can determine its fragmentation level, and if necessary, determine if any special action is required for recurring fragmented files.

The Analysis View displays file fragmentation, free space fragmentation, and general disk utilization. The lower part of the view lists the most fragmented files with the number of *fragments*.

Analyze disk fragmentation

In Windows 2000/XP, you can use Speed Disk to perform an analysis of each disk to determine its fragmentation before you optimize it.

To analyze a disk's fragmentation in Windows 2000/XP

1. In the Norton SystemWorks Professional Edition main window, click **Norton Utilities** > **Optimize Performance**.
2. Click **Speed Disk**.
3. Under Select a Drive, select the disk that you want to analyze (the default disk is C).
4. Under Select a View, click **Analyze**.
5. In the Speed Disk main window, click **Actions**.
6. Click **Start Analyzing**.
   The analysis time depends on the degree of fragmentation, the size of the disk, and the number of files on the disk.
7. To stop the analysis, click **Stop Analyzing**.

You can use the Analyze View to identify the most fragmented files. You can then use that information to reduce susceptibility to repeated fragmentation. After you run the analysis, any highly fragmented files are listed in the Most Fragmented Files list. By specifying the placement of highly fragmented files, you can reduce the amount of fragmentation that occurs during use.

See "Customize Speed Disk" on page 176.

If these files become fragmented frequently, even following optimization, you can use the Speed Disk Drive Options to specify where you want Speed Disk to place the files during the next optimization.

View file fragmentation in Windows 98/Me

In Windows 98/Me you can view a fragmentation report that shows fragmentation for individual files.

To view a fragmentation report

1. In the Norton SystemWorks Professional Edition main window, click **Norton Utilities** > **Optimize Performance**.
2. Click **Speed Disk**.
3. In the Speed Disk window, click **Properties** > **Fragmentation Report**.
4. In the Fragmentation Report window, in the left pane, click a folder. The list of files inside the selected folder shows the following:
   - File name
   - Percent optimized (100% means that the file is unfragmented)
   - Number of file fragments, if any
   - Number of clusters that the file occupies

Customize Speed Disk

During optimization, Speed Disk places files in the best locations for efficient access and flexible growth. However, there may be situations in which you need to ensure that certain files are placed in specific areas on the disk, so they are accessed first or have lots of room to expand without being fragmented.

Speed Disk provides options that let you customize many aspects of the disk optimization process:

- Schedule optimizations for individual volumes based on time or threshold of fragmentation.
- Adjust the system resources used by Speed Disk in relation to other running processes.
- Customize the optimization for each disk.
- Run Speed Disk in the background to optimize volumes at preset times.
- Record optimization events to the system Event Log.

Speed Disk stores the optimization options you choose for each disk, so you need not reset options each time you optimize unless you want to change them.

If you change any Drive Options or Global Options settings, including the maximum number of disks to optimize concurrently, you must restart Speed Disk before the changes take effect.

Speed Disk options determine how Speed Disk optimizes specific disks. For example, if one disk contains mostly data and another contains a combination of data and frequently used applications, you may want to specify file placement for the frequently used applications. In Windows 2000/XP, these options are called Drive Options.

To set Speed Disk options in Windows 2000/XP

1. In the Norton SystemWorks Professional Edition main window, click **Norton Utilities** > **Optimize Performance**.
2. Click **Speed Disk**.
3. In the Speed Disk main window, click **View**.
4. Click **Drive Options**.
5. Select a tab to customize Speed Disk options.
6. Click **OK**.

Follow this procedure to set Speed Disk options in Windows 98/Me.

To set Speed Disk options in Windows 98/Me

1. In the Norton SystemWorks Professional Edition main window, click **Norton Utilities** > **Optimize Performance**.
2. Click **Speed Disk**.
3. In the Speed Disk main window, click **Properties**.
4. Click **Options**.
5. Click **Customize**.
6. Select a tab to customize Speed Disk options.
   For more information on these settings, see the online Help.

See "Use online Help" on page 94.

7. Click **OK**.

Specify file placement during optimization

In general, Speed Disk default settings for placing files provide the best performance. Change the disk's default settings only if your files require special consideration. For example, if you use a disk utility that updates certain file dates even when those files have not been used, you may want to limit optimization on these files so Speed Disk doesn't move them to the area of the disk reserved for frequently used files.

If you want to place files ina specific location, overriding the Speed Disk default file placement, use the Drive Options view. This view lets you select files or *file types* and specify where they should be placed during optimization.

See "Use online Help" on page 94.

For more information about Speed Disk optimization capabilities and customization, see the online Help.

Schedule optimization

In Windows 2000/XP, in addition to scheduling times for disk optimization, Speed Disk Schedule options let you select a fragmentation threshold. When the selected disk reaches the specified degree of fragmentation, Speed Disk automatically optimizes it. You can select Auto Threshold or enter a percentage. The default fragmentation percentage threshold is determined by the disk's fragmentation level and is managed by the Auto Threshold feature.

For example, if you set the fragmentation threshold to 5% (within the recommended range), Speed Disk begins optimizing in the background when the level reaches 5%.

The threshold setting only applies to disk optimizations that you schedule. The schedule must be enabled for this setting to take effect.

To set an optimization schedule by threshold in Windows 2000/XP

1. In the Norton SystemWorks Professional Edition main window, click **Norton Utilities** > **Optimize Performance**.
2. Click **Speed Disk**.
3. Check **Enable Schedule**.
4. In the Select a View pane, click **Schedule Options**.
5. Check **Optimize Based On Threshold**.
   Auto Threshold is enabled by default, causing Speed Disk to optimize the selected disk when fragmentation goes over an amount determined by the disk characteristics.
6. To specify another threshold, check **Only Optimize Drive If Fragmentation Exceeds**: and enter a percentage value.
   The recommended percentage is between 2% and 5%. This ensures that Speed Disk optimizes the disk when the fragmentation percentage reaches the level you specify at the scheduled time.
7. Click **Apply**.

Optimize registry and swap files

Windows creates a special file on your disk called a swap file (also called a paging file). This file is used to create additional memory so your Windows programs can make maximum use of available system resources. The size of the file changes dynamically in response to demand for memory space. This can cause significant fragmentation of the file, which in turn reduces performance.

Another Windows component that can affect system performance is the Windows registry. The registry is a dynamic database of configuration settings for both the operating system and applications. Over time, the internal structure of this database can become disordered. This disorder can also affect system performance.

About the Windows swap file

The swap file is vital to Windows performance. Windows uses this file for temporary data storage, freeing up more of the faster physical memory (RAM) for applications. The swap file grows and shrinks dynamically to meet changing system conditions.

Because the swap file changes continuously, it can become fragmented quickly. When the swap file is fragmented, Windows performance suffers. By default, Speed Disk defragments and optimizes the swap file to help maintain optimal Windows performance.

If the swap file is located in the midst of other changing files on the disk, its high rate of fragmentation can result in the other files becoming more fragmented than they otherwise would. To minimize the fragmentation that can result from frequent swap file changes, Speed Disk normally places the swap file last on the disk, after the other files and before the consolidated free space. This speeds future optimizations.

Specifying a minimum size for the swap file causes Windows to reserve space on the disk for it. This can keep the size of the swap file relatively stable. If you have specified a minimum size for the swap file, Speed Disk places it first on the disk for optimal Windows and application performance.

Optimize the registry and swap file in Windows 98/Me

Norton Optimization Wizard sets a minimum swap file size to reduce file fragmentation, and reorganizes the Windows registry data for efficient storage and retrieval.

Close all programs before you run Norton Optimization Wizard. If a program attempts to alter the registry while Norton Optimization Wizard is optimizing it, the settings it is attempting to save are lost. Also, do not empty the Recycle Bin or change Windows settings during registry optimization.

To optimize your registry and swap file in Windows 98/Me

1. In the Norton SystemWorks Professional Edition main window, click **Norton Utilities** > **Optimize Performance**.
2. Click **Norton Optimization Wizard**.
3. Click **Next**.
   Norton Optimization Wizard checks your swap file and makes a recommendation.
4. In the Optimize your Swap File pane, check **Configure Swap File for optimal performance**, then click **Next**.
   Norton Optimization Wizard offers to optimize your registry.
5. Check **Optimize my Registry**, then click **Next**.
   Norton Optimization Wizard summarizes the choices that you have made and warns you that you must restart to complete the optimization process.
6. Close any other programs that are running, then click **Reboot**.
   Norton Optimization Wizard implements your choices and restarts your computer.

Run Speed Disk from the command line

You can run Speed Disk from the command line, from a console window, or a DOS window, or by clicking Run on the Start menu and typing the following command. These options override any you have previously selected in Speed Disk.

Windows 98/Me command-line syntax

For Windows 98/Me, use the following syntax:

SD32 [drive:]...[/F | /U | /Q]

The options can be entered in any order.

drive	Optimizes the specified drives. Each drive letter specified must be followed by a colon. This option overrides those that may have been previously selected in Speed Disk.
/F	Full optimization.
/U	Defragment files only.
/Q	"Quick" defragment free space only.

For example, to start Speed Disk from the command-line such that it performs a quick optimization of drive E, you enter:

SD32 E: /Q

Windows 2000/XP command-line syntax

For Windows 2000/XP, use the following syntax:

sdntc -drive=<drive letter>:

For example, to start Speed Disk from the command line and optimize drive C, you would enter:

sdntc -drive=c:

-DRIVE	Specifies the drives to be optimized
-L	Runs LiveUpdate to update Speed Disk program files

Eliminating data permanently

13

Wipe Info lets you remove selected files or folders from your hard disk. In Windows 98/Me, you can also wipe free space from your hard disk, ensuring that previously deleted sensitive information is not left behind. Wipe Info is not part of the Typical installation. Use the Complete Installation option to install Wipe Info.

If you are running a recovery application such as System Restore or GoBack 3 Personal Edition, you must erase your history before running Wipe Info to ensure that the data is completely wiped.

About Wipe Info

Wipe Info erases files or folders from your hard disk so that they cannot be recovered. On Windows 98/Me, Wipe Info also wipes the free space on your hard disk.

When you wipe a file, Wipe Info wipes the file and attempts to wipe any free space associated with the file and the file's directory entry.

When you wipe a folder, Wipe Info wipes all of the files in the folder, and then, if the folder is empty, it attempts to wipe the directory entry for the folder.

When you wipe free space in Windows 98/Me, Wipe Info wipes the free drive space, free file space, and erased file entries.

In general, you cannot recover files that have been wiped. Windows Me/XP System Restore can restore files that have been wiped if they are one of the protected file types. By default, many document types, such as .doc and .xls files in My Documents, are protected. Windows Me/XP System Restore

maintains copies of protected files. Wiping the original file does not wipe the copy that Windows Me/XP System Restore maintains.

Wipe Info eliminates a file's contents from the disk, but does not remove the file name. While the file name remains on disk, it is no longer visible in Windows Explorer, and there is no data stored with it. On NTFS volumes, streams (alternate data that belongs to a file but is not stored with the file) are also wiped.

Never store sensitive information in a file name or attribute. This data can be replicated throughout your system without your knowledge, for example, in a list of most recently used files, or a file name search. This type of embedded information can be very difficult to remove from your computer.

About hexadecimal values

Wipe Info uses hexadecimal values to wipe files. Hexadecimal refers to the base 16 number system. This system is used by computer programmers to represent numbers in the binary number system, which uses the zero and one symbols in combinations to represent any number.

The hexadecimal system consists of the numbers 0 to 9 and the letters A to F, used in combinations. For example, the decimal number 14 is represented as the letter E in the hexadecimal system.

In Wipe Info options, you can specify values from 00 to FF, representing numbers from 0 to 255 respectively. You can type the value using a number or a character from A to F.

About the Government Wipe process

When you select Government Wipe, Wipe Info does the following:

- Overwrites the data with 00s
- Verifies the 00 overwrite
- Overwrites with FFs
- Verifies the FF overwrite
- Writes a random value, or a value that you choose from 00 to FF
- Verifies the random overwrite
- Reverifies the random overwrite to ensure that it was written correctly
- Repeats as many times as you specify, up to 100

Set Wipe Info options

You can specify how Wipe Info handles *hidden*, read-only, and system files. You can also specify the type of wipe to use. The following wiping methods are available:

Fast Wipe	Overwrites the data being wiped with the hexadecimal value of your choice.
Government Wipe	Combines several wiping and overwriting processes to conform to specifications in DoD (Department of Defense) document 5220-22-M, National Industrial Security Program Operating Manual, for the ultimate security level when eliminating data from digital media. See "About the Government Wipe process" on page 184.

To change Wipe Info options in Windows 2000/XP

1. In the Norton SystemWorks Professional Edition main window, click **Norton Utilities** > **System Maintenance** > **Wipe Info**.
2. In the Wipe Info window, on the View menu, click **Options**.
3. On the General tab, select the options for Read-only, System, and Hidden file types.
4. On the Wipe Type tab, select one of the following:
   - Fast Wipe
   - Government Wipe
5. In the Hex Value text box, type or specify the hexadecimal values that Wipe Info should use when it overwrites the wiped files space.
6. In the Times to Perform This Wipe text box, type the number of times that Wipe Info should repeat this process.
7. Click **Apply**.

See "About the Government Wipe process" on page 184.

See "About hexadecimal values" on page 184.

To change Wipe Info options in Windows 98/Me

1. In the Norton SystemWorks Professional Edition main window, click **Options** > **Norton Utilities** > **Wipe Info Settings**.
2. On the Wipe Info Settings tab, specify the settings that you want. Your options are:

Display Wipe Info icon on the desktop	Create a Wipe Info shortcut on the Windows desktop. You can drag items to this icon to wipe them.
Number of times to repeat the delete	Type the number of times that you want Wipe Info to repeat the wiping process.

3. Select a wipe type. Your options are:

Fast Wipe	Under Write once the value, specify the value that Wipe Info should use when it writes over the wiped file space. The value can be up to 9 digits, and the default is 0 (zero).
Government Wipe	Under Number of times to repeat this, specify the number of times that Wipe Info should repeat the process of writing all 1s and 0s, then type the value that Wipe Info should use for a final write. The final write is verified to ensure that no disk errors caused sensitive data to survive the wiping process.

4. Click **OK**.

Wipe files or folders

To wipe a file or folder in Windows 2000/XP, add it to the Wipe Info window.

To wipe files or folders in Windows 2000/XP

1. In the Norton SystemWorks Professional Edition main window, click **Norton Utilities** > **System Maintenance** > **Wipe Info**.
2. In the Wipe Info window, click **Browse**.
3. Select one of the following:
   - Folders
   - Files
4. Select the folder or file to wipe.
5. Click **Open**.

6 With the Wipe Info window open, locate a folder or file on your hard disk.

7 Drag the selected item into the Wipe Info file list.

8 Continue to drag all of the files and folders that you want to wipe into the Wipe Info list.
If you add an item to the list by mistake, select the item, then click **Remove Item(s) from list**.

9 Click **Wipe All**.

10 Click **Yes** to confirm the warning.
All of the files in the list are wiped.

In Windows 98/Me, Wipe Info uses a wizard to automate the wiping process.

To wipe files or folders in Windows 98/Me

1 In the Norton SystemWorks Professional Edition main window, click **Norton Utilities** > **System Maintenance** > **Wipe Info**.

2 In the Wipe Info Wizard window, select Files, Folders, or Free Space, then click **Next**.
Depending on which item you select, your options might vary.
Your options are:

Files	Wipe Info deletes the selected file, its directory entry if possible, and any associated free space.
Folders	You can specify whether subfolders should be included. Wipe Info deletes all files in the selected folder, its directory entry if possible, and any associated free space.
Free Space	Wipe Info wipes the free space on the selected disk. This includes free disk space, file slack space, and erased file entries that are not in the Recycle Bin. (You must empty the Recycle Bin to have deleted files wiped.) Wipe Info verifies the disk's integrity before wiping free space. If the disk has problems, you are prompted to run Norton Disk Doctor.

3 Select the file, folder, or disk, then click **Next**.

4 If you see a warning message, click **Yes** to proceed.

5 For Wipe Options, select one of the following:

- Fast Wipe
- Government Wipe

See "Set Wipe Info options" on page 185.

6 In the Wipe Summary window, review what Wipe Info will do, then click **Next**.

7 If you want to change any selections, click **Back**.
Wipe Info displays its progress and summarizes the results, including any problems that were encountered during the wiping process.

8 View the results, then click **Close**.

9 Follow the on-screen instructions to finish the wiping process.

4

Norton CleanSweep

Removing unwanted files and programs

14

When you use your computer, you sometimes install programs that remain on your hard disk after you no longer need them. It's also easy to accumulate files–for example, pictures and media files–that are used once and remain on your hard disk, taking up space. Norton CleanSweep cleans your hard disk of unwanted files and programs.

Remove unwanted files and programs

Safety Sweep makes a backup copy as it removes programs and files so that you can restore the program or file later. Safety Sweep also works with Uninstall Wizard to identify programs and files that are safe to remove.

Enable and disable Safety Sweep

Enable Safety Sweep to protect important files and programs from accidental removal. Disable Safety Sweep when you want to delete previously protected files and programs.

To enable or disable Safety Sweep

See "Access Norton SystemWorks tools" on page 55.

1. Start Norton SystemWorks Professional Edition.
2. In the Norton SystemWorks Professional Edition main window, click **Options** > **Norton CleanSweep**.
3. On the Safety Sweep tab, in the Safety Sweep group, select one of the following:
   - On
   - Off
4. Click **OK**.

Identify files that are safe to remove

Safety Sweep provides indicators that tell you how safe it is to remove various files:

Green indicator	The file is safe to remove. When Safety Sweep is on, Norton CleanSweep lets you remove files with green indicators.
Yellow indicator	The file should be deleted with caution.
Red indicator	The file is in use or protected and cannot be removed. You cannot change the status of a file marked red. See "How do I delete files that Norton CleanSweep has marked red?" on page 233.

Use Fast & Safe Cleanup

See "Fast & Safe Cleanup options" on page 92.

Norton CleanSweep Fast & Safe Cleanup finds and deletes specific file types that are safe to remove, such as temporary files, Internet browser cache files, and the files in the Windows Recycle Bin. You can use Fast & Safe Cleanup any time to free hard disk space instantly, and on a regular schedule to keep your disk free of clutter.

If you are connected to the Internet, close your browser before running Fast & Safe Cleanup.

To use Fast & Safe Cleanup

See "Access Norton SystemWorks tools" on page 55.

1. Start Norton SystemWorks Professional Edition.
2. In the Norton SystemWorks Professional Edition main window, click **Norton CleanSweep** > **CleanUp**.
3. Click **Fast & Safe Cleanup**.
   Fast & Safe Cleanup scans your hard disks and displays an estimate of how much disk space can be reclaimed by deleting unnecessary files.
4. Click **Clean Now**.
5. In the Space Freed dialog box, click **OK**.

Remove unwanted programs

Norton CleanSweep lets you remove unwanted programs to free disk space. Uninstall Wizard deletes not only a program's individual files, but also any external references to the files, such as program *icons* or entries in system configuration files. Uninstall Wizard creates a backup of the program that it

keeps for as long as you specify. You can use Restore Wizard to restore these backups.

See "Backing up and restoring programs" on page 203.

If you need to restore the program, Backup Wizard creates a single, compressed backup file for use as a reserve, leaving all of the original files and configuration information in place.

You can also use the Windows shortcut menu to select a program for Norton CleanSweep to remove.

Do not use Norton CleanSweep to remove Norton SystemWorks. Instead, use Add/Remove Programs in the Windows Control Panel. See "If you need to uninstall Norton SystemWorks Professional Edition" on page 52.

Remove a program with Uninstall Wizard

Uninstall Wizard displays a program tree that you can use to identify the program that you want to remove. The program tree includes the following expandable folders:

Start Menu	Programs on the Start menu
Desktop	Any shortcut icons on the desktop
Programs Monitored By Smart Sweep	Any programs that have been monitored by Smart Sweep (if you have not yet monitored any program installations, the folder is empty and the folder's description is No Programs Monitored By Smart Sweep)
Downloads Monitored By Internet Sweep	Any ActiveX controls that have been monitored by Internet Sweep (if you have not yet monitored any ActiveX control installations, the folder is empty and the folder's description is No Downloads Monitored By Internet Sweep)

To uninstall a program

See "Access Norton SystemWorks tools" on page 55.

1. Start Norton SystemWorks Professional Edition.
2. In the Norton SystemWorks Professional Edition main window, click **Norton CleanSweep** > **CleanUp**.
3. Click **Uninstall Wizard**.
4. Select the program to remove, then click **Next**.
5. Follow the on-screen instructions to proceed.

6 Specify whether or not you want to back up the selected program and confirm deletion of each item in the program. Your options are:

Finish	Remove the entire program.
View	View, add to, or remove from the list of components that will be uninstalled. See "If you want to remove only part of a program" on page 195 and "If you want to view more information about a component" on page 195.

7 Click **OK** to confirm the program removal.
A dialog box reports the action as completed and asks if you want to see a summary containing a detailed description of the actions performed.

During an uninstall, Uninstall Wizard might disappear behind any other windows that are open on your computer. However, Uninstall Wizard reappears once the uninstall is complete.

To uninstall a program from the shortcut menu

1 In Windows Explorer, right-click the application to remove, then click **CleanSweep > Uninstall Wizard**.

2 Follow the on-screen instructions to proceed.

3 Specify whether or not you want to back up the selected program and confirm deletion of each item in the program. Your options are:

Finish	Remove the entire program.
View	View, add to, or remove from the list of components that will be uninstalled. See "If you want to remove only part of a program" on page 195 and "If you want to view more information about a component" on page 195.

4 Click **OK** to confirm the program removal.
A dialog box reports the action as completed and asks if you want to see a summary containing a detailed description of the actions performed.

During an uninstall, Uninstall Wizard might disappear behind any other windows that are open on your computer. However, Uninstall Wizard reappears once the uninstall is complete.

If you want to remove only part of a program

You can modify components of a program that is being removed with Uninstall Wizard. For example, if a component is shared with another program or if it contains data that you want, you might want to keep it.

To identify the components to remove

1. In Uninstall Wizard, click **View**.
   The components that are selected to remove are checked.
2. To prevent a component from being uninstalled, uncheck it.
3. Click **OK**.

If you want to view more information about a component

In the program selection dialog box, you can perform various actions with a program component before you remove it.

Component type	Action
Text file	View the file contents
Program file	View the Windows system information
Executable program	Launch the program using the Run button
Executable program Dynamic Link Library (DLL) file or Visual Basic extension file	See a description of any DLL files the program uses or any programs that depend on the file using the Link button

To view information about a component

1. In Uninstall Wizard, click **View**.
   The components selected for removal are checked.
2. In the dialog box, select a component to view, then click **View**.
3. When you have finished viewing the component, click **OK**.

Use summary information

See "Use the Norton CleanSweep Master Log" on page 91.

When Uninstall Wizard is finished, a Summary dialog box displays the completed activity. This activity is also recorded in the Master Log.

The summary includes the following:

- Date and time the uninstallation was performed
- Name of the component that was uninstalled
- Backup destination, if applicable
- Description of the program
- Number of bytes deleted

Removing Internet clutter

15

When you visit a Web site, you accumulate temporary *cache* files, *cookies*, *browser* plug-ins, and *ActiveX controls*. Many of these files are used once but remain on your hard disk.

Uninstall programs and remove files

Norton CleanSweep uses the following features to uninstall programs and remove files *downloaded* from the Internet:

Internet Uninstall	Uninstalls programs downloaded from the Internet. See "Uninstall programs downloaded from the Internet" on page 198.
Internet Cache Cleanup	Removes temporary files stored by Web browsers. See "Remove Internet cache files" on page 198.
Cookie Cleanup	Removes Internet cookie files. See "Manage cookies on your computer" on page 199.
Plug-in Cleanup	Removes Web browser plug-ins. See "Remove unwanted plug-ins" on page 200.
ActiveX Cleanup	Removes ActiveX controls downloaded from the Internet. See "Remove unwanted ActiveX controls" on page 201.

You must have a connection to the Internet, an Internet service provider (*ISP*), and Netscape Navigator (4.7 or later) or Microsoft Internet Explorer (5.5 or later) to benefit from these cleanup features. America Online users must be using AOL Internet Explorer (OEM version 5.0 or later).

Uninstall programs downloaded from the Internet

When you browse the Internet, you sometimes *download* programs that you use temporarily or that become obsolete. These programs remain on your hard disk, taking up space. Internet Uninstall removes these programs from your hard disk.

To uninstall a program

See "Access Norton SystemWorks tools" on page 55.

1. Start Norton SystemWorks Professional Edition.
2. In the Norton SystemWorks Professional Edition main window, click **Norton CleanSweep** > **Internet**.
3. Click **Internet Uninstall**.
   Uninstall Wizard displays a program tree that lists installations that were monitored by Internet Sweep.
4. Select the program to remove, then click **Next**.
5. Follow the on-screen instructions to proceed.
6. Specify whether or not you want to back up the selected program and confirm the deletion of each item in the program. Your options are:

Finish	Remove the entire program.
View	View or modify the list of components that will be removed. See "If you want to remove only part of a program" on page 195 and "If you want to view more information about a component" on page 195.

7. Click **OK** to confirm the program removal.
   A dialog box reports the action as completed and asks if you want to see a summary containing a detailed description of the actions performed.

Remove Internet cache files

Internet *cache* files are temporary files used by your Internet *browser* to store copies of each Web page you visit. A browser can display the page more quickly by retrieving it from the cache than by retransmitting it from the Web site. Internet Cache Cleanup frees valuable disk space. Remove your Internet cache files frequently if you use the Internet and online services often. The deleted cache information reloads automatically from the Web.

Before removing cached files, close your Internet browser if it is open.

To remove cached files

See "Access Norton SystemWorks tools" on page 55.

1. Start Norton SystemWorks Professional Edition.
2. In the Norton SystemWorks Professional Edition main window, click **Norton CleanSweep** > **Internet**.
3. Click **Internet Cache Cleanup**.
   Internet Cache Cleanup scans your disk for Internet cache files and displays an estimate of the disk space that is currently occupied by Internet cache files.
4. In the Internet Cache Cleanup dialog box, click **Clean**.
   A message informs you that the Internet cache files will not be backed up.
5. Click **Yes** to respond to the message.
   Internet Cache Cleanup displays a summary of files that will be deleted. To view a log of the activity, click **View**.
6. Click **Finish**.
   Internet Cache Cleanup deletes the Internet cache files, and displays a message when it is finished.
7. Click **OK**.

Manage cookies on your computer

Cookies are small data files that are placed on your hard disk while you are browsing the Internet. Web sites that you visit use small programs to place cookies on your hard disk so that they can track your preferences and browsing habits.

Decide which cookies to keep

All *cookies* are safe to remove; you do not need to back them up. However, if a cookie belongs to a Web site where you make purchases or conduct business or confidential transactions, it might contain a password or code for verification of your identity. If you remove this type of cookie, you might have to enter personal information on the Web site again.

If you revisit a Web site whose cookie you removed, it creates a new cookie.

To view a cookie's information

See "Access Norton SystemWorks tools" on page 55.

1. Start Norton SystemWorks Professional Edition.
2. In the Norton SystemWorks Professional Edition main window, click **Norton CleanSweep** > **Internet**.
3. Click **Cookie Cleanup**.
4. Select a cookie whose information you want to view.
5. Click **View**.

Remove unwanted cookies

Before you can use Cookie Cleanup, disable Safety Sweep. See "Enable and disable Safety Sweep" on page 191.

To remove unwanted cookies

See "Access Norton SystemWorks tools" on page 55.

1. Start Norton SystemWorks Professional Edition.
2. In the Norton SystemWorks Professional Edition main window, click **Norton CleanSweep** > **Internet**.
3. Click **Cookie Cleanup**.
4. Do one of the following:
   - To remove all cookies, click **Select All**.
     If cookies are marked yellow or red, Cookie Cleanup does not let you remove them.
   - To mark specific cookies for removal, check the cookies that you want to remove.

See "Identify files that are safe to remove" on page 192.

5. Click **Clean**.
6. In Cookie Cleanup Wizard, follow the on-screen instructions to remove the cookies.
   It's safe to remove cookies without making backups.
7. In the Cookie Cleanup dialog box, click **Close**.

Remove unwanted plug-ins

Plug-ins enhance Web browsing by letting you view certain document types, watch video, or listen to live or recorded audio.

Plug-ins can take up significant hard disk space, so if you do not use a plug-in regularly, you can remove it. Plug-ins are safe to remove. You can back them up if you plan to use them again.

See "Uninstall programs downloaded from the Internet" on page 198.

Use Plug-in Cleanup if Smart Sweep did not monitor installation. If Smart Sweep did monitor the installation, use Internet Uninstall to remove the plug-ins.

Before removing plug-ins, close your Internet browser if it is open.

To remove unwanted plug-ins

See "Access Norton SystemWorks tools" on page 55.

1. Start Norton SystemWorks Professional Edition.
2. In the Norton SystemWorks Professional Edition main window, click **Norton CleanSweep** > **Internet**.
3. Click **Plug-in Cleanup**.
4. Do one of the following:
   - To remove all plug-ins, click **Select All**.
   - To mark specific plug-ins for removal, check the plug-ins that you want to remove.

   If Safety Sweep is on, you must turn it off to select a file that is color-coded yellow. While a file is selected, click **Advise** to see more information about the file and advice on what to do with it, or click **View** to view the file.
5. Click **Clean**.
6. In Plug-in Cleanup Wizard, follow the on-screen instructions to remove the plug-ins.
7. In the Plug-in Cleanup dialog box, click **Close**.

Remove unwanted ActiveX controls

ActiveX controls enhance Web pages with interactive content. They activate when you visit a Web page containing ActiveX content. The first time a page is visited, its ActiveX controls are *downloaded* to your hard disk. Internet Sweep monitors ActiveX controls and their locations.

All ActiveX controls are safe to remove; you do not need to back them up. If you revisit a Web site whose ActiveX control you removed, it downloads the control again.

Norton CleanSweep does not let you remove the ActiveX controls that are used by the Windows 98 desktop. It lets you view and remove only those ActiveX controls that are downloaded from the Internet.

See "Uninstall programs downloaded from the Internet" on page 198.

Use ActiveX Cleanup if Internet Sweep did not monitor installation. If Internet Sweep did monitor the installation, use Internet Uninstall to remove the ActiveX controls.

Before removing ActiveX controls, close your Internet *browser* if it is open.

To remove ActiveX controls

See "Access Norton SystemWorks tools" on page 55.

1. Start Norton SystemWorks Professional Edition.
2. In the Norton SystemWorks Professional Edition main window, click **Norton CleanSweep** > **Internet**.
3. Click **ActiveX Cleanup**.
4. In the ActiveX Control Cleanup dialog box, do one of the following:
   - To remove all ActiveX controls, click **Select All**.
   - To mark specific ActiveX controls for removal, check the ActiveX controls that you want to remove.
5. Click **Clean**.
6. In ActiveX Control Cleanup Wizard, follow the on-screen instructions to remove the ActiveX controls.
   When the cleanup is complete, ActiveX Control Cleanup Wizard displays a summary.
7. Click **Finish**.
8. To close the ActiveX Control Cleanup dialog box, click **Close**.

Backing up and restoring programs

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The Norton CleanSweep Backup Wizard safely compresses infrequently used programs to provide more disk space. You can move the compressed backup to a new location or copy it to a different computer. Restore Wizard ensures that all of the program's related files are restored when you want to use the program again. It also restores registry values.

Back up programs

Backup Wizard creates a single, compressed backup of a program for use as a reserve in the event that you need to restore the program.

To back up a program

See "Access Norton SystemWorks tools" on page 55.

1. Start Norton SystemWorks Professional Edition.
2. In the Norton SystemWorks Professional Edition main window, click **Norton CleanSweep** > **Programs**.
3. Click **Backup Wizard**.
4. In the Backup Wizard program list, select the file or program to back up.
   Backup Wizard analyzes the program.
5. Verify the backup folder location, then click **Next**.
   Backup Wizard displays a summary of what files will be backed up.
6. To confirm what actions will be taken by Backup Wizard, click **Finish**.
7. When Backup Wizard has finished, click **OK**.

Delete unwanted backups

Norton CleanSweep maintains compressed backups of uninstalled files. Once you are sure that you no longer want to restore a program, you can delete the backup.

To delete a backup

See "Access Norton SystemWorks tools" on page 55.

1. Start Norton SystemWorks Professional Edition.
2. In the Norton SystemWorks Professional Edition main window, click **Norton CleanSweep** > **Programs**.
3. Click **Restore Wizard**.
   Restore Wizard displays a list of backed up programs.
4. Select the backup to delete, then click **Delete**.
   Backup Wizard displays a summary of what will be deleted.
5. Click **Yes** to delete the backup.
   The backup is deleted, and no longer appears in the list of backed up programs.
6. Click **Cancel** to return to the Norton CleanSweep main window.

Delete a backup in response to an alert

Norton CleanSweep asks if you want to keep an existing backup or delete it to make more hard disk space available.

To delete a backup in response to an alert

1. In the Old Backup Files alert, click **Yes**.
2. In Restore Wizard, ensure that the item you want to delete is selected.
3. Click **Delete**.
4. Click **Yes** to confirm the deletion.

Restore a backed up program

Restore Wizard uses a Norton CleanSweep backup to restore a program to its original state.

To restore a backed up program

See "Access Norton SystemWorks tools" on page 55.

1. Start Norton SystemWorks Professional Edition.
2. In the Norton SystemWorks Professional Edition main window, click **Norton CleanSweep** > **Programs**.

3 Click **Restore Wizard**.

4 Select the backup to restore, then click **Next**.

5 In the selected backup, select the items that you want to restore, then click **Next**. Your options are:

All the items	Restore all the files.
Only the files selected below	Specify the files to restore before proceeding.

6 Specify how you want Norton CleanSweep to proceed if a file being restored already exists, then click **Next**.

7 Click **Next** to have Norton CleanSweep restore the files to the location where they were previously stored.

8 Click **Finish** to restore the backup.

9 In the Restore Complete dialog box, click **Yes** to delete the backup.

10 Click **OK**.

5

Norton Ghost

Copying disk images with Norton Ghost

17

Norton Ghost creates clones, or exact disk images, of your hard disks. You can use these in an emergency to restore a damaged disk, or to migrate the contents of your hard disk, complete with settings, to another computer.

About protecting your computer with backups

Making backups of the data on your computer is an essential part of maintaining your computer system. If you do not make regular backups you risk losing all data from hardware or software failure.

You can back up your data in two ways:

Back up your entire system	Creating a system backup ensures that every file is saved. Your operating system, software packages, system files, and data files are all available for disaster recovery. There are two major advantages to this: there is no chance that you have skipped an important file, and your computer is returned to full functionality quickly.
Back up data files only	You can choose to back up only those files that are crucial to you. The problem with this is that you may miss some important files. The other problem is that if you experience hardware or software failure, you must reinstall your software and reconfigure your computer before recovering the data files that you have backed up. This can be very time consuming.

Once you have performed a backup, any changes made to your computer, or data created, are not included in the backup. If you enter data that is

crucial to you, then you must back up those data files to ensure that you have a comprehensive disaster backup solution.

When to back up your computer

You should perform a backup of your system on a regular basis, for example, once a week, and keep more than just the most recent backup. If disaster occurs, you will lose no more than a week's changes.

You should also perform a series of backups if you make major changes to your computer, for example, installing a new operating system or new software. When making a major change:

- Back up your computer, capturing the existing operating system and files.
- Make the change to your computer, such as install the new operating system.
- Back up your computer, capturing the new operating system.

About restoring and recovering data

Restoring and recovering have different meanings when referring to computer files and data. When a file or data is damaged or lost, first try to recover the damaged or lost information using tools such as Norton Disk Doctor or UnErase Wizard. These tools repair or undo the damage done to a file or data. It is always best to try to recover, rather than restore, a damaged file. If you are unable to recover the file or data, you can restore an undamaged copy. Restoring a file replaces a damaged file with a copy made before it was damaged. Restoring a file returns it to the state it was in when you made the backup. Any changes that you made after the date of the backup are lost when you restore a file. Tools such as Norton Ghost, Image, or GoBack 3 Personal Edition can be used to restore a file if recovery fails.

How Norton Ghost works

Norton Ghost is a backup and cloning solution for home and small business users. Norton Ghost lets you:

Back up a computer	Take a full system backup of your computer.
Restore a computer if hardware or software failure occurs	Once you have created a backup, you can quickly restore a computer to the last backup copy.
Clone one partition or hard disk to another	Directly copy one partition or hard disk to another, creating an exact copy of the original.

Norton Ghost includes both Windows and DOS tools. You can use the Windows tools for most backup and recovery tasks. Use the DOS tools if you have a hard disk failure or cannot start Windows.

How Norton Ghost backs up your computer

Norton Ghost backs up your computer to a type of file called an *image file*. An image file is not a graphics file, but is a full copy of a hard disk or a partition. This includes the operating system, software packages, system files, and data files.

The image file can only be restored to hardware that is similar to the hardware from which it was created. For example, if you back up your laptop computer, you cannot restore it to your desktop computer.

The image file must be saved to a storage medium other than the disk or partition that is being backed up. For example, you cannot back up your hard disk to the same hard disk. You must save the backup to another hard disk, a CD-R/RW, or another storage device.

How Norton Ghost restores your computer

Once you have created a backup, you are prepared if disaster strikes. If you experience hardware or software failure and all other solutions have failed, you can then restore the image file onto your hard disk.

See "Emergency procedures" on page 21.

As a backup contains only those changes made up to the time the backup was created, first try to recover your systems and data using the disk repair and data recovery tools in Norton SystemWorks Professional Edition. If this is not successful, you can use Norton Ghost to restore the backup image file onto your partition or hard disk. This overwrites any existing software and

data. You must be sure that you are restoring the correct partition and hard disk, and that you have recovered any data files that you can from the corrupted system.

How Norton Ghost clones your computer

You can use Norton Ghost to *clone* a hard disk or partition within a hard disk directly to another. This creates a replica of the existing disk or partition. Cloning can be used to upgrade to a new hard disk.

For more information about the cloning process, see the *Norton Ghost User's Guide* PDF on the CD.

Where to store image files

Norton Ghost lets you back up your computer by saving an *image file* to any of the following storage locations:

Second hard disk	If you have a second hard disk installed in your computer, you can create a backup on this disk. This method is fast and efficient.
Second partition	If you have a second partition on your hard disk, you can back up a partition to an image file on the second partition. However, there must be an existing second partition before you perform the backup. A disadvantage of using a second partition on the local hard disk is that if your hard disk fails completely, then you can not access the backup image.
CD-R/RW	You can back up to a supported CD-R/RW drive. If you have problems writing to CD-R/RW, then check that your drive is listed on the support Web site, www.symantec.com/ghost.
Removable media	Removable media include Jaz disks, Zip disks, and external hard disks connected by TCP/IP, LPT, and USB peer-to-peer.
Virtual partition	The virtual partition is a partition that is created when you perform a Norton Ghost operation from Windows. All the files required for the backup, restore, or clone are automatically installed onto the virtual partition and the task is performed. Most of the virtual operation is not apparent to you, however, there may be some occasions when you must know what the virtual partition is and what it does.

See "Access the User's Guide PDFs" on page 95.

For more information, see the *Norton Ghost User's Guide* PDF on the CD.

About the Ghost boot disk

A Ghost boot disk is a floppy or other removable disk that loads DOS and *driver* files to let you run Ghost.exe on your computer. A Ghost boot disk can be created using Ghost Boot Wizard, a utility supplied with Norton Ghost.

A Ghost boot disk lets you use the DOS-based Ghost.exe to recover your computer if you experience hard disk failure and cannot run Windows.

Back up and restore your computer

Creating a Ghost boot disk is a one-time activity. You can create disk image clones in a separate procedure. Creating backup image files should be done regularly. When you create a Ghost boot disk, you should immediately test it to ensure that it will start your computer if you need it.

You need a Ghost boot disk if you need to restore your computer after a software or hardware failure, or if you want to clone the hard disk of a computer that does not have Windows installed. You do not need a Ghost boot disk to run the Backup, Restore, and Clone Wizards.

See "Access the User's Guide PDFs" on page 95.

For full information about these processes, see the *Norton Ghost User's Guide* on the Norton SystemWorks Professional Edition CD.

Use the Ghost Boot Wizard to create a standard boot disk. Depending on the files that are included on the boot disk, you may require more than one blank floppy disk.

To create a Ghost boot disk

See "Access Norton SystemWorks tools" on page 55.

1. Start Norton SystemWorks Professional Edition.
2. On the Norton SystemWorks Professional Edition main window, click **Norton Ghost** > **Ghost Utilities**.
3. In the Ghost Utilities window, click **Norton Ghost Boot Wizard**.
4. In the Norton Ghost Boot Wizard window, click **Standard Ghost Boot Disk**, then click **Next**.
5. In the Additional Services window, select the storage device support options that you want to have installed on the boot disk.

6 If you saved your image file to an external device, you may need to select one or more of the following External Storage options:

No USB Support	Add no support for USB devices to the boot disk.
USB 1.1 Support	Add support for USB 1.1 external devices to the boot disk.
USB 2.0 Support	Add support for USB 2.0 external devices to the boot disk.
Firewire Support	Add support for FireWire external devices to the boot disk.
Assign DOS drive letters	If you select an external storage option, Norton Ghost assigns a DOS drive letter to the external device.

7 Click **Next**.

8 In the DOS version window, click **Next**.

9 In the Ghost executable location window, verify the location, then click **Next**.

10 In the Destination Drive window, in the Floppy Disk Drive field, select the appropriate drive letter.

11 Ensure that Format disk(s) first is checked to format the disks before disk creation.

12 Ensure that Quick Format is checked to perform a quick format.

13 Click **Next**.

14 Review the boot disk details and click **Next** to start creating the boot disks.

15 In the Format A:\ dialog box, click **Start** to format the floppy disk.

16 Click **OK** to confirm the format.

17 When the format is complete click **OK**, then click **Close** to continue creating the boot disk.

You must test the Ghost boot disk or CD/DVD to ensure that you can run Ghost.exe and access your backup image file.

To test a Ghost boot disk

1. Do one of the following:
   - Insert the Ghost boot disk into your floppy disk drive and restart your computer.
   - Insert the backup CD or DVD into the CD/DVD drive and restart your computer. Press any key to continue when you are prompted.
2. Your computer restarts into DOS and launches Ghost.exe.
3. On the Ghost main menu, click **Local** > **Check** > **Image File**.
4. In the Disk Image file name dialog box, select the image file that you have created.
   To find the image file, click the down arrow beside the File Image field. Select the drive on which you saved the image file to display the image file name.
5. Click **Yes** to proceed with the integrity check.
6. Once the integrity check is complete, click **Continue**.
7. Remove the Ghost boot disk or CD/DVD from the disk drive and restart your computer.

If the image passed the integrity check, you can restore your computer if Windows is not operational.

View an image file

You can check that your *image file* contains the files that you expect to see by opening and viewing it in Ghost Explorer.

To view an image file in Ghost Explorer

See "Access Norton SystemWorks tools" on page 55.

1. Start Norton SystemWorks Professional Edition.
2. In the Norton SystemWorks Professional Edition main window, click **Norton Ghost** > **Ghost Utilities**.
3. Click **Norton Ghost Explorer**.
4. On the File menu, click **Open**.
5. Select the image file.
6. Click **Open**.

To create a backup image file

See "Access Norton SystemWorks tools" on page 55.

1. Start Norton SystemWorks Professional Edition.
2. In the Norton SystemWorks Professional Edition main window, click **Norton Ghost** > **Ghost Basic**.
3. Click **Backup**, then click **Next**.
4. In the Backup Wizard window, in the Source pane, do one of the following:
   - Select a disk to back up.
   - Select one or more partitions to back up.
     The partitions must reside on the same disk.
5. Do one of the following:
   - Click **File** to back up to a file.
   - Click **Recordable CD or DVD** to back up to a CD or DVD drive.
     Norton Ghost selects the CD or DVD drive that contains writable media.
6. Click **Next**.
7. If this is the first time you have used Norton Ghost on this computer, in the Add Ghost Disk Identification dialog box, click **OK** to identify all hard disks.
   If you have previously used Norton Ghost on this computer, this dialog box does not appear.
8. In the Advanced settings window, click **Next**.
9. In the Important Information dialog box, click **Next**.
10. In the Disaster Recovery window, click **Continue**.
    This dialog box warns you to check that you can run Ghost.exe and access your image file once it has been created.
11. In the Backup Wizard window, review the task details, then click **Run Now** to create the backup image file.
    Your computer is restarted in DOS, the backup image file is created, and your computer is restarted in Windows.

Back up a hard disk or partition

If your image file is too large to fit on a CD or other *removable media*, Norton Ghost spans the CD and prompts you to insert another disk.

To back up a hard disk or partition

See "Access Norton SystemWorks tools" on page 55.

1. Start Norton SystemWorks Professional Edition.
2. In the Norton SystemWorks Professional Edition main window, click **Norton Ghost** > **Backup**.
3. Click **Next**.
4. In the Create Task window, in the left pane, do one of the following:
   - Select a whole disk to back up.
   - Select one or more partitions to back up.
5. In the right pane, do one of the following:
   - Click **File**, then click **Browse** to select a destination and file name to which the disk or partition is to be backed up.
   - Click **Recordable CD or DVD** to back up to a CD or DVD drive. Norton Ghost selects the CD or DVD drive that contains writable media.
6. Click **Next**.
7. If this hard disk has not previously been fingerprinted, in the Add Ghost fingerprints dialog box, select a drive to fingerprint, then click **OK**.

See "Access the User's Guide PDFs" on page 95.

8. If you want to set advanced driver settings for the backup, click **Driver Settings**.
   Norton Ghost automatically detects the required drivers. If this detection fails, then you may need to set the drivers in Driver Settings. For more information on setting up drivers, see the *Norton Ghost User's Guide* PDF on the CD.
9. Click **Run Now** to create the backup image file.
   Your computer is restarted and the backup image file is created.

Restore your computer from an image file

You can restore a hard disk or partition from an *image file* stored on another hard disk, partition, or external media from Windows, if you can start Windows.

If you cannot start Windows, you can use the Ghost boot disk to start your computer and restore your hard disk or partition.

Restore your computer only if you experience software or hard disk failure. The destination disk or partition is completely overwritten with no chance of recovering any data.

To restore a disk or partition using Windows

See "Access Norton SystemWorks tools" on page 55.

1. Start Norton SystemWorks Professional Edition.
2. In the Norton SystemWorks Professional Edition main window, click **Norton Ghost** > **Restore**.
3. In the Restore Image window, select a restore method. Your options are:

Restore from CD-R/ CD-RW	Restores the hard disk or partition from an image file stored on one or more CDs
Restore from a Norton Ghost Image File	Restores the hard disk or partition from a local image file

4. Click **Next**.
5. In the left pane, select the image file or partitions within the image file to restore.
6. In the right pane, select the destination hard disk or partitions that are to be overwritten.
7. Click **Next**.
8. If this is the first time you have used Norton Ghost on this computer, in the Add Ghost fingerprints dialog box, select a drive to fingerprint, then click **OK**.
   If you have previously used Norton Ghost on this computer, then this dialog box does not appear.

See "Access the User's Guide PDFs" on page 95.

9. If you want to set advanced driver settings for the backup, click **Driver Settings**.
   Norton Ghost automatically detects the required drivers. If this detection fails, then you may need to set the drivers in Driver Settings. See the *Norton Ghost User's Guide* PDF on the CD for more detail on setting up drivers.
10. Click **Next**.
11. Click **Restore Now** to restore the image file to the selected hard disk or partition.
    Your computer is restarted and the restore operation completed.

To restore your computer if you cannot run Windows

1. Insert a Ghost boot disk into your computer's floppy disk drive and start your computer.
2. On the main menu, select a recovery method. Your options are:

Local	Click **Local** > **Disk** > **From Image**.
Peer-to-peer connection	Click **Disk** > **From Image**

3. In the File Locator dialog box, type the path and file name of the image file.
4. Select the drive or device.
5. Select the full path name.
   The image file may reside on a local drive (but not the one to which it is being copied), or on a locally mapped network file server. When using peer-to-peer connections, the file is located on the slave computer.
6. Press **Enter**.
7. In the Destination Drive dialog box, select the destination disk. Choose carefully as this is the disk that will be overwritten.
   The Destination Drive dialog box shows the details of every drive that Norton Ghost finds on the local computer. If the source image file resides on a local disk, then this disk is not available for selection.
8. In the Destination Drive Details dialog box, confirm or change the destination disk partition layout.
   The Destination Drive Details dialog box shows a suggested partition layout for the destination disk. By default, Norton Ghost tries to maintain the same size ratio between the new disk partitions. However, you should note the following:
   - You can change the size of any target FAT, NTFS, or Linux Ext2/3 partition by entering the new size in megabytes.
   - You cannot enter a value that exceeds the available space, is beyond the file system's limitations, or is not large enough to contain the data held in the source partition.
9. Click **OK**.

10 Do one of the following:

- Click **Yes** to proceed with the disk cloning.
  Norton Ghost creates the destination disk using the source image file disk details. If you need to abort the process, press Ctrl+C, but be aware that this leaves the destination disk in an unknown state.
  Only click Yes if you are sure that you want to proceed. The destination disk is completely overwritten with no chance of recovering any data.
- Click **No** to return to the menu.

11 If you are restoring from a spanned image, do one of the following:

- Click **OK** to continue on the same form of media.
- Click **Filename** to restore from a different location, then type the location and file name of the image file span.

12 Restart the computer when the disk image restore is complete.

You should remove the second hard disk before you restart your computer. If you leave the second disk in the computer, damage can occur to both of the bootable operating systems.

Once you have performed a restore with Ghost.exe, verify the integrity of your disk.

To verify the integrity of a disk

See "Access Norton SystemWorks tools" on page 55.

1 Start Norton SystemWorks Professional Edition.

2 In the Norton SystemWorks Professional Edition main window, click **Norton Ghost** > **Ghost Advanced**.

3 Click **Image Integrity Check**.

4 In the Image Integrity Check Wizard, click **Browse** and find the image file that you want to verify.

5 If you want to view the contents of the image file in Ghost Explorer, click **Open Image in Ghost Explorer**.

6 Click **Next**.

7 If you want to set advanced settings for the verification, click **Advanced Settings**.

8 Click **Next**.

9 In the Important Information dialog box, if you do not want to view this warning again, click **Don't show this screen again**, then click **Next**.

10 Click **Run Now** to start the image verification.

For more information

The following information about Norton Ghost is available:

- The Norton Ghost online Help is available on the Norton SystemWorks Help menu and in many Norton Ghost dialog boxes.

See "Use online Help" on page 94.

- The *Norton Ghost User's Guide* is available in PDF format on the CD.

See "Access the User's Guide PDFs" on page 95.

- Tutorials are included on the CD to demonstrate common tasks.
- Links to selected knowledge base articles can be selected from the Help menu in the Ghost Boot Wizard, Norton Ghost, and Ghost Explorer.
- The Symantec Web site (www.symantec.com/ghost) has answers to frequently asked questions, troubleshooting tips, online tutorials, a knowledge base, and the latest product information.

6

Appendixes

Troubleshooting Norton SystemWorks

A

The information in this section will help you solve the most frequently encountered problems. If you can't find the solution to your problem here, there is a wealth of information on the Symantec Web site. You can find updates, patches, online tutorials, Knowledge Base articles, and virus removal tools.

Explore the Symantec service and support Web site

The Symantec service and support Web site offers information focused on your product and whether the product is for home or business use.

To explore the Symantec service and support Web site

1. Point your browser to www.symantec.com/techsupp
2. On the service and support Web page, click **I am a home/small business user**.
3. On the introduction Web page, in the column on the left, click a link for the information that you want.

If you cannot find what you are looking for using the links on the introduction page, try searching the Web site.

To search the Symantec service and support Web site

1. On the left side of any Web page in the Symantec service and support Web site, click **search**.

2 Type a word or phrase that best represents the information for which you are looking.
Use the following guidelines when searching the Symantec Web site:
   - Type a single word in lowercase letters to find all occurrences of the word, including partial matches. For example, type install to find articles that include the word install, installation, installing, and so on.
   - Type multiple words to find all occurrences of any of the words. For example, type virus definitions to find articles that include virus or definitions or both.
   - Type a phrase enclosed in quotation marks to find articles that include this exact phrase.
   - Use a plus (+) sign in front of all of the search terms and a space between terms, if you use more than one term, to retrieve documents containing all of the words. For example, +Internet +Security finds articles containing both words.
   - For an exact match, type the search words in uppercase letters.
   - To search for multiple phrases, enclose each phrase in quotation marks and use commas to separate the phrases. For example, “purchase product”, “MAC”, “Norton SystemWorks” searches for all three phrases, and finds all articles that include any of these phrases.
3 Select the area of the Web site that you want to search.
4 Click **Search**.

Troubleshoot Norton SystemWorks problems

Check here for possible solutions to issues that might arise with Norton SystemWorks Professional Edition.

Use GoBack 3 Personal Edition to revert your disks

See “Revert your hard disk with GoBack 3 Personal Edition” on page 107.

If you are having problems due to a bad program installation or system *crash* and you installed GoBack 3 Personal Edition before the problems began, GoBack 3 Personal Edition can revert your hard disk to an earlier state with the least effort. If you revert your hard disk, your data files will also revert to an earlier state.

Troubleshoot Norton Ghost

See "Access the User's Guide PDFs" on page 95.

Troubleshooting advice for Norton Ghost is included in the *Norton Ghost User's Guide* PDF on the CD.

My Rescue Boot Disk does not work

Rescue Disks are available only for Windows 98/Me.

Due to the number of product-specific technologies used by manufacturers to configure and initialize hard disks, the Rescue program cannot always create a bootable disk automatically. If your Rescue Boot Disk does not work properly, do one of the following:

See "Create Emergency Disks" on page 28.

- If you have access to another computer, create Emergency Disks and use them to restart your computer.
- If you have a special startup disk for your computer, add it to your Rescue Disk set. In an emergency, start from that disk. Remove the disk and insert your Rescue Boot Disk. At the DOS prompt, type **A:RSHELL**, press Enter, then follow the on-screen instructions.
- Use the Disk Manager or similarly named program that came with your computer to make your Rescue Boot Disk bootable. Make sure to test your modified Rescue Boot Disk.

Sometimes, your Rescue Boot Disk does not work properly because you have more than one *operating system* installed, such as Windows 2000 and Windows 98.

To change the operating system on your Rescue Boot Disk

1. Start from your hard drive.
2. Insert your Rescue Boot Disk into drive A.
3. At the DOS prompt, type **SYS A:**
4. Press **Enter**.
   This transfers the operating system to the Rescue Boot Disk. Be sure to retest your Rescue Disks.

See "Update your Rescue Disks" on page 74.

You should update your Rescue Disks regularly.

The alert tells me to use my Rescue Disks, but I did not create them

See "Create Emergency Disks" on page 28.

If you have not created Rescue Disks on your own computer, you can still use the Norton SystemWorks Professional Edition CD to create Emergency Disks on your own or another computer. Although they are not as powerful as the Rescue Disks that are customized for your computer, Emergency Disks can help you to recover from many common emergencies.

See "Start from the CD and scan for viruses" on page 23.

If your computer can start from the CD, you can use the Norton SystemWorks Professional Edition CD as an Emergency Disk to scan for viruses.

I cannot start from drive A or my CD

If your computer does not check drive A or the CD-ROM drive first on startup, use your computer's BIOS setup program to change the order in which your computer checks the available drives for System software.

Be careful when making changes using your computer's setup program. If you have never used it before, you may want to refer to your computer manufacturer's documentation.

To change your computer's settings

1. Restart your computer.
   A message appears telling you the key or keys to press to run SETUP, such as Press <DEL> if you want to run SETUP.
2. Press the key or keys to launch the setup program.
3. Set the Boot Sequence to the order that you want.
   Setup programs vary from one manufacturer to the next. If you cannot find the Boot Sequence option, use the setup program's help system, refer to the documentation that came with your system, or contact your system's manufacturer.
4. Save the changes, then exit the setup program.

You may need to use a special boot disk rather than the Rescue Boot Disk. In this case, use the boot disk or startup disk that came with your computer.

See "My Rescue Boot Disk does not work" on page 227.

If your computer is set up with more than one operating system, such as Windows 2000 and Windows 98, you may need to modify the Rescue Boot Disk.

Troubleshoot Norton AntiVirus problems

Use these suggestions to help solve problems encountered while running Norton AntiVirus.

Auto-Protect does not load when I start my computer

If the Norton AntiVirus Auto-Protect icon does not appear in the lower-right corner of the Windows taskbar, Auto-Protect is not loaded. There are three likely reasons this is happening.

You may have started Windows in safe mode. Windows restarts in safe mode if the previous shutdown did not complete successfully. For example, you may have turned off the power without choosing Shut Down on the Windows Start menu.

To restart Windows

1. On the Windows taskbar, click **Start** > **Shut Down**.
2. In the Shut Down Windows dialog box, click **Restart**.
3. Click **OK**.

Norton AntiVirus may not be configured to start Auto-Protect automatically.

To set Auto-Protect to start automatically

1. In the Norton SystemWorks Professional Edition main window, click **Options** > **Norton AntiVirus**.
2. In the Norton AntiVirus Options window, under System, click **Auto-Protect**.
3. Ensure that Start Auto-Protect when Windows starts up is checked.

Norton AntiVirus may not be configured to show the Auto-Protect icon in the tray.

To show the Auto-Protect icon in the tray

1. In the Norton SystemWorks Professional Edition main window, click **Options** > **Norton AntiVirus**.
2. In the Norton AntiVirus Options window, under System, click **Auto-Protect**.
3. Ensure that Show the Auto-Protect icon in the tray is checked.

I have scanned and removed a virus, but it keeps infecting my files

There are four possible reasons a virus could be reappearing.

The virus might be in a program file with an unusual extension for which Norton AntiVirus is not configured to look.

To reset Norton AntiVirus scanning options

1. Start Norton SystemWorks Professional Edition.
2. In the Norton SystemWorks Professional Edition main window, click **Options** > **Norton AntiVirus**.
3. In the Norton AntiVirus Options window, under System, click **Manual Scan**.
4. Under Which file types to scan for viruses, click **Comprehensive file scanning**.
5. Click **Manual Scan** > **Bloodhound**.
6. Ensure that Enable Bloodhound heuristics is checked, and click **Highest level of protection**.
7. Click **OK**.
8. Scan all of the disks that you use and repair all infected files.

The source of the infection could also be a floppy disk. Scan all of the floppy disks that you use to ensure that they are free of viruses.

See "If you need to use Rescue Disks (Windows 98/98SE/Me)" on page 138.

Another reason could be that the virus is remaining in memory after you remove it from the *boot record*. It then reinfects your boot record. Use your Rescue Disks to remove the virus.

If the problem is a Trojan horse or worm that was transmitted over a shared *network* drive, you must disconnect from the network or password protect the drive to let Norton AntiVirus delete the problem.

Norton AntiVirus cannot repair my infected files

See "Keeping current with LiveUpdate" on page 113.

The most common reason that Norton AntiVirus cannot repair your *infected files* is that you do not have the most current virus protection on your computer. Update your virus protection regularly to protect your computer from the latest viruses.

If after using LiveUpdate the virus still cannot be repaired, the file may be corrupted, or contain a new virus. There are two additional options:

See "If you have files in Quarantine" on page 136.

- Quarantine the file and submit it to Symantec.
- If a non-infected copy of the file exists, delete the infected file and replace it with the non-infected file.

I get an error when testing basic Rescue Disks

If you get the message Non-system disk, replace the disk and press any key when testing your Rescue Disks, the Rescue program may not have prepared the floppy boot files correctly.

To repair the Rescue Boot Disk without having to reformat the disk and create a new Rescue Disk set

1. Remove the Rescue Boot Disk and restart your computer.
2. Insert the Rescue Boot Disk into the floppy disk drive.
3. On the Windows taskbar, click **Start** > **Run**.
4. In the Run dialog box, type **SYS A:**
5. Click **OK**.

I can't receive email messages

There are three possible solutions to this problem.

Temporarily disable email protection. This might allow the problem email message to be downloaded so that you can once again enable email protection. You are protected by Auto-Protect and Script Blocking while email protection is disabled.

To temporarily disable incoming email protection

1. Start Norton SystemWorks Professional Edition.
2. In the Norton SystemWorks Professional Edition main window, click **Norton AntiVirus** > **Options**.
3. In the Norton AntiVirus Options window, under Internet, click **Email**.
4. Uncheck **Scan incoming Email**.
5. Click **OK**.
6. Download your email messages.
7. Reenable incoming email protection.

Your email client may have timed out. Make sure *timeout* protection is enabled.

If you continue to experience problems downloading email messages, disable email protection.

To disable email protection

1. Start Norton SystemWorks Professional Edition.
2. In the Norton SystemWorks Professional Edition main window, click **Norton AntiVirus** > **Options**.
3. In the Norton AntiVirus Options window, under Internet, click **Email**.
4. Uncheck **Scan incoming Email**.
5. Uncheck **Scan outgoing Email**.
6. Click **OK**.

I can't send email messages

If you get the message, Norton AntiVirus was unable to send your email message because the connection to your email server was disconnected, your email client may be set to automatically disconnect after sending and receiving mail.

For Norton AntiVirus to scan outgoing email messages for viruses, it intercepts and scans the messages before they are sent to your email provider. To resolve this issue, turn off this option within your email client. Consult your email client manual for instructions on how to do this, or disable Norton AntiVirus outgoing email scanning.

To disable outgoing email scanning

1. Start Norton SystemWorks Professional Edition.
2. In the Norton SystemWorks Professional Edition main window, click **Norton AntiVirus** > **Options**.
3. In the Norton AntiVirus Options window, under Internet, click **Email**.
4. Uncheck **Scan outgoing Email**.
5. Click **OK**.

Troubleshoot Norton CleanSweep

Use these suggestions to help solve problems encountered while running Norton CleanSweep.

I can't install Norton CleanSweep

If you have problems installing the Norton CleanSweep component of Norton SystemWorks Professional Edition, you might need to disable the Fast & Safe Scheduler or recheck your system requirements.

- Installation issues
  You should disable the Fast & Safe Cleanup Scheduler before reinstalling or uninstalling Norton CleanSweep.
  Do not install an older version of Norton CleanSweep over this version. If you want to install a previous version of Norton CleanSweep, uninstall this version first, restart your computer, and then install the older version.
- System requirements issues
  Check that your computer meets the minimum system requirements to install Norton SystemWorks Professional Edition.
  While most components of Norton CleanSweep might function correctly, you should not use Norton CleanSweep in a multiple processor environment.

See "System requirements" on page 41.

How do I delete files that Norton CleanSweep has marked red?

Items marked red indicate that their removal might endanger the stability of your computer's system files. Norton CleanSweep does not let you delete files marked red. You should not remove these files unless you are sure that they are not essential. To remove the files, use Windows Explorer.

I get an error message that Csinject is causing a problem

Csinject is one of the components of Smart Sweep. This file is necessary to monitor program installations. When Norton CleanSweep prompts you to shut down all running programs before installing a program, this component should not be shut down.

The following are essential components of Smart Sweep:

- Csinsm32.exe
- Csinject.exe
- Csinsmnt.exe (Windows 2000/XP only)

Smart Sweep is not detecting any changes on any installation

This problem occurs when background applications are running. Check to see if any applications are running before you install the application that you want to monitor.

Troubleshoot Norton Utilities

Use these suggestions to help solve problems encountered while running Norton Utilities.

Norton Disk Doctor, Speed Disk, or other Norton Utilities keep restarting

Windows lets many applications access the hard drive simultaneously. When an application writes to the hard drive, the drive's directories change. Since some of the Norton Utilities programs, such as Norton Disk Doctor and Speed Disk, need up-to-date directory information, they must reread these structures any time another application accesses the drive. To solve this problem, do one of the following:

- Close other applications that are accessing the disk.
- Start Windows without starting the applications that normally start by pressing Shift when you start Windows 98 or Windows Me.
- Disable any programs that are scheduled to run at regular intervals so they do not start during a Norton Utilities operation.

My drive might not be configured properly

If Norton Disk Doctor or Speed Disk displays the message "Drive C: may not be configured properly," there are several items you can check. Detailed procedures are provided in a Knowledge Base article titled "Error: Drive X: may not be configured properly when running Norton Disk Doctor or Speed Disk." To find this article, point your browser to http://www.symantec.com/techsupp/

Troubleshoot disk errors in Windows 98/Me

See "Create and use Rescue Disks" on page 70.

Windows 98/Me are based on DOS (Disk Operating System), a command-line driven operating system. The Norton SystemWorks Professional Edition CD includes four DOS-based Norton Utilities programs you can use

to diagnose and fix problems on your Windows 98/Me computer. Those programs are also available on the Emergency Disks and Rescue Disks that you can create from the Norton SystemWorks Professional Edition CD.

DOS procedures can be used on FAT16 or FAT32 volumes, but not on NTFS volumes.

The following DOS-based programs come with Norton Utilities:

- Norton Disk Doctor (NDD.EXE)
  Checks the integrity of logical disk structures and performs surface analysis tests to ensure the integrity of your disks.
  Diagnoses and repairs common disk problems.
- UnErase (UNERASE.EXE)
  Recovers erased files automatically or manually.
- UnFormat (UNFORMAT.EXE)
  Restores accidentally formatted disks or repairs a severely damaged disk.
- Disk Editor (DISKEDIT.EXE)
  Full-featured sector editor for advanced users that lets you manually examine and modify files, directories, clusters, sectors, and system areas of your disk. Use Disk Editor to edit, save, or undo changes to your disk parameters and to search an area of your disk for a particular data string.

DOS-based troubleshooting list

Many of these procedures using DOS-based programs (Disk Editor, Norton Disk Doctor, UnErase, and UnFormat) require you to have a blank, formatted floppy disk available to create an undo file, just in case the corrections you made are not what you expected.

For online information about the DOS-based Norton Utilities programs, you can press F1 on your computer keyboard while using them.

Before you begin

The procedures using the DOS-based programs require you to insert the Emergency Disk, or Rescue Disk that has the program's .exe file. To save time, make directory printouts of your Emergency Disks and Rescue Disks so you will know where the .exe files are located.

Some procedures recommend using either your Rescue Disk set or your Emergency Disks. If you have a Rescue Disk set, try that first, since your

Rescue Disks have more up-to-date files for your computer. Otherwise, use the Emergency Disks.

DOS-based programs do not support NTFS formatted disks.

My computer displays an error message on startup

The following list includes many of the errors you may see when you have problems starting your computer. Turn to the page indicated to see how to solve your problem.

Parity error at address	page 237
ROM Checksum invalid	page 237
Seek error	page 237
Segment boundary overrun	page 237
Hard Drive # Controller failure, hard drive absent or missing	page 237
Faulty….	page 237
Illegal instruction trapped	page 237
HDD Controller Failure	page 238
Hardware Information Lost	page 238
Battery Discharged	page 238
CMOS Checksum error	page 238
CMOS Information not found	page 238
Date and Time not set	page 238
Disk Boot Failure	page 238
Drive X error	page 238
Hard Disk # error	page 238
Memory Size Mismatch	page 238
Unexpected amount of memory found	page 238
No ROM BASIC – System halted	page 239
Invalid Partition Table	page 239

Invalid System Disk	page 239
Missing Operating System	page 239
Hard Disk Boot sector invalid	page 239
Insert a (valid) boot disk	page 239
Error loading Operating System (O/S)	page 239

Repair general hardware problems

When you turn your computer on, it performs the Power-On Self Test (POST). This process verifies the existence and operation of hardware (hard drives, video hardware, memory, and the keyboard) that is critical to starting your computer. If a problem is found, it is reported to you on the screen or as a series of beeps if the video display is disconnected or not working. Refer to your computer manufacturer's documentation to decipher beep codes.

Many hardware problems that are found display messages similar to these:

- Faulty...
- Hard disk controller failure
- Hard disk absent or failed
- Illegal instruction trapped
- Parity error at address
- ROM checksum invalid
- Segment boundary overrun

Observe your computer manufacturer's safety guidelines before opening your computer. For proper handling instructions, refer to your computer manufacturer's documentation.

Check inside your computer

Before suspecting a defective device, check inside your computer to:

- Make sure adapter cards, such as video and disk controller cards, are seated properly in the correct expansion slots.
- Make sure memory modules are seated correctly.
- Make sure drive cables are connected properly.

- Make sure multiple hard drives are configured to work together.
  For more information on properly configuring multiple hard drives, refer to your computer manufacturer's documentation as well as any documentation you might have on your additional hard drives.
- Make sure additional adapter cards, such as multimedia or tape backup controller cards, are configured properly.
  For information on properly configuring these devices, refer to the manufacturer's documentation.

After checking these items, close the computer and turn it on to see if your computer starts normally.

If you cannot repair general hardware problems

If the problem persists, contact your computer manufacturer or the manufacturer of the device that you suspect is faulty.

Correct computer setup data

The POST process checks the settings of many hardware components against values stored in a CMOS chip. CMOS chips store vital information about your computer. Even when your computer is turned off, the CMOS chip continuously stores this information using a battery. If a discrepancy is found, a message similar to one of the following displays:

- Battery discharge
- CMOS checksum error
- CMOS information not found using defaults
- Date and time not set–run setup
- Drive *x* error
- Hard disk # error
- Hardware information lost–run setup
- HDD controller failure
- Memory size mismatch–run setup
- Unexpected amount of memory found–run setup

The error may also be related to a partition table or *boot record* problem.

See "Recover startup data" on page 239.

To correct computer setup data

1. Turn on your computer.
2. As your computer starts, press the key combination to enter the Setup program.
   The correct key or key combination is usually shown on the screen as the computer first starts.
3. Update the CMOS settings.
   For more information, see your computer manufacturer's documentation.
   Many computers will update the CMOS with appropriate settings simply by running the Setup program and saving the values when you exit.

Recover startup data

When the POST process is complete, the hard drive is accessed for startup information if your A drive does not contain a disk. The first piece of startup information is the master boot record, which contains the partition table. The next piece of startup information is the boot record of the startup partition.

If any of the information in the master boot record, partition tables, or boot record is corrupt or missing, a message similar to the following displays:

- Hard disk boot sector invalid
- Please insert a boot disk
- Please insert a valid boot disk and press any key

Never use Rescue Disks made on another computer. Rescue Disks contain information specific to the computer on which they were made. If you don't have Rescue Disks, you can use Emergency Disks. See "To recover startup data with Emergency Disks" on page 240.

To recover startup data with Rescue Disks

1. Insert the Rescue Boot Floppy Disk into the startup drive.
2. Turn on your computer and wait for the Rescue Disk screen to appear.

3 Use the DownArrow key to select **Rescue Recovery** and press **Enter**. The Restore Rescue Information dialog box appears. Rescue Restore examines your computer's boot records and partition table information and automatically selects any damaged Rescue Restore items to be restored.

If Rescue Restore does not detect any startup file problems, the Items To Restore check boxes will be cleared. Do not proceed with the restore process. Press **Esc** to exit.

4 If Boot Records, Partition Tables, or both are selected, press **Alt+R** to restore the information.
A confirmation box appears (twice) that lets you verify the information you are about to restore.

5 Press **Enter** and follow the on-screen instructions.

6 Remove the disk from the startup drive and restart your computer.

If the problem has been fixed, your computer will start normally.

See "If your computer won't start from your hard disk" on page 21.

You can use the Norton SystemWorks Professional Edition CD as an Emergency Disk to scan with Norton AntiVirus if your computer can start up from the CD-ROM drive.

Do not store undo data on the same physical drive you are attempting to repair. The best place to store undo data is on a blank formatted floppy disk.

To recover startup data with Emergency Disks

1 Insert Emergency Disk 1 into the startup drive.

2 Restart your computer and wait for the Emergency Disk screen to appear.

3 Use the DownArrow key to select **Disk Doctor**.

4 At the prompt, type **/REBUILD**, then press **Enter**.

It is possible to damage your hard drive using the /REBUILD switch. Be sure you have backups of your data before using this procedure.

5 Insert Emergency Disk 2 when requested.
The Norton Disk Doctor main dialog box appears.

6 Press **Enter** to diagnose the drive.
A message box appears indicating that your hard drive has no partitions.

7 Press **Enter** to have Norton Disk Doctor rebuild the partition table.
A message box appears indicating that a partition has been found and asks you if you would like to revive it.

8 Do one of the following:

- If the partition size indicated is correct, press **Enter** to revive the partition table.
- If the partition size indicated is incorrect, click **No**.
- If you are unsure, click **Yes** and create an undo disk.
  Norton Disk Doctor continues to search.

9 Do one of the following:

- To revive more partition tables, press **Enter** to search for them.
- Press **Alt+N** to proceed.
  Before changes are made to the disk, you are prompted to create an undo file.

10 Press **Enter** to create an undo file.
The Undo File dialog box appears.

11 Use the UpArrow and DownArrow keys to select the drive on which to store the undo data.

12 Insert a formatted floppy disk with at least 100 KB of free space into the appropriate drive and press **Enter**.

Do not reuse undo disks. Overwriting the same disk means that previous changes cannot be undone.
Norton Disk Doctor saves the undo data to disk and repairs your partition tables. When Norton Disk Doctor has finished, a message box appears, indicating the partition information has been changed.

13 Remove the disk from the startup drive and restart your computer.

If the problem has been fixed, your computer will start normally.

If you cannot recover startup data

See "Recover operating system files" on page 241.

If the problem persists, it is possible that the disk's operating system files are missing or corrupt.

Recover operating system files

Before you perform this procedure, make sure you have file-level access to the drive from the command prompt.

When your computer successfully completes the POST process, your computer loads the master boot record program that passes control to the disk's boot record. The boot record then loads IO.SYS, which carries out the rest of the startup process. To start Windows, both COMMAND.COM and MSDOS.SYS files must be present. If they are not, your computer will not start Windows properly.

To recover operating system files

1. Insert the Rescue Boot Floppy Disk Into the startup drive.
2. Turn on your computer and wait for the Rescue Disk screen to appear.
3. Press **Esc** to go to the DOS command prompt.
4. Insert NU Emergency Utility Disk 1, which contains the SYS.COM file, into the startup drive.
5. At the command prompt, type **SYS C:**, then press **Enter**.

   If the message "Insert system disk in drive A:\" appears, insert the Rescue Boot Floppy Disk into the startup drive and press any key. The SYS program copies the system files from your Rescue Disk to your hard drive.
6. Insert the disk labeled Rescue Boot Floppy Disk, which contains the MSDOS.SAV file, into the startup drive.
7. At the command prompt, type **C:\WINDOWS\COMMAND\ATTRIB -R -S -H C:\MSDOS.SYS**
   If Windows is installed in a location other than C:\WINDOWS, modify the command line with the proper location (for example, C:\WIN95\COMMAND\ATTRIB -R -S -H C:\MSDOS.SYS).
8. At the command prompt, type **COPY A:\MSDOS.SAV C:\MSDOS.SYS**, then press **Enter**.
   Your MSDOS.SYS file is restored.
9. Remove the Rescue Disk from the drive and restart your computer.

If the problem has been fixed, your computer will start normally.

If you cannot recover operating system files

If the problem persists, it is possible that the disk itself has a problem. Consider reinstalling your Windows operating system from the Windows CD.

Recover corrupt registry files

There is a potential for data loss when you restore the registry. You may lose settings for programs that have been installed and program options that have been saved since the backup of the registry was made.

If you have a problem with the registry, while starting your computer, you will receive a message similar to one of the following:

- Registry access error
- Warning: Windows has detected a registry or configuration error

Windows stores a backup of the registry files each time you successfully start your system, so first try to have Windows restore the files by selecting the Restore From Backup And Restart button in the error message dialog box. If this procedure fails to resolve the problem, restore the registry data from your registry backup, usually found in C:\WINDOWS\SYSTEM.RSC and C:\WINDOWS\USER.RSC.

There may be several backups of the SYSTEM and USER files, with *extensions* such as .NS0, .NS1, .SW0, or .NU0. Try all of these, in the order of newest to oldest.

When restoring the registry, always restore both of the registry files: System.dat and User.dat.

Try to restore the Windows registry with a backup copy Windows made of the registry the last time you successfully started your computer.

To recover corrupt registry files with the Windows 98/Me registry backup

1. Start or restart your computer.
2. While “Starting Windows...” is on your screen, press and release **F8**. Alternately, you can hold down **Ctrl** while your computer starts.
3. In the startup window, choose the **Command Prompt Only** option.
4. At the command prompt, change to the directory where Windows is installed (usually C:\WINDOWS).
   For example, type **C:** and press **Enter**. Then type **CD \WINDOWS** and press **Enter**.

5 Type the following commands, then press **Enter** after each one (system.da0 and user.da0 contain zeroes):
attrib -h -r -s system.dat
attrib -h -r -s system.da0
attrib -h -r -s user.dat
attrib -h -r -s user.da0

6 Rename system.dat and user.dat to system.bak and user.bak. Type the following commands, then press **Enter** after each one:
ren system.dat system.bak
ren user.dat user.bak

7 Type the following commands, then press **Enter** after each one:
copy system.da0 system.dat
copy user.da0 user.dat

8 Restart your computer.

If you are unable to restore the registry files with the Windows 98/Me registry backup, try using your Rescue Disks.

To recover corrupt registry files with Rescue Disks

1 Insert the Rescue Boot Floppy disk into the startup drive.

2 Turn on your computer and wait for the Rescue Disk screen to appear.

3 Press **Esc** to go to the DOS command prompt.

4 Change directories to C:\WINDOWS (or to the directory where Windows is installed).
For example, if Windows is in C:\WINDOWS, type **C:**, then press **Enter**. Then type **CD \WINDOWS**, then press **Enter**.

5 Type the following commands, then press **Enter** after each one:
command\attrib -h -r -s system.dat
command\attrib -h -r -s user.dat

6 Rename system.dat and user.dat to system.bak and user.bak. Type the following commands, then press **Enter** after each one:
ren system.dat system.bak
ren user.dat user.bak

7 Type the following commands, then press **Enter** after each one:
copy system.rsc system.dat
copy user.rsc user.dat

8 Remove the Rescue Disk from drive A and restart your computer.

If the problem persists, reinstall Windows to recreate your Windows 98 or Windows Me registry files.

Troubleshoot problems with Disk Editor

See "Disk Editor" on page 247.

The DOS-based Disk Editor program lets you access data on a damaged floppy disk, recover files on a disk that appears empty, recover a formatted or severely damaged disk, repair a disk with incorrect media descriptor byte information, recover lost or damaged directories, recover overwritten files, recover corrupt registry files, or recover an inaccessible disk.

Disk Editor

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Disk Editor (DISKEDIT.EXE) is a DOS-based, full-featured, sector-editing tool capable of accessing virtually any area of a hard or floppy disk. You can edit files and directories, the partition table, the boot record, and the file allocation tables (FATs) on most hard disks. You can treat any group of clusters or sectors as an object to view and edit.

The procedures for using Disk Editor assume that you are familiar with the inner workings of disks. You must understand what you are doing before you edit any area of a disk. Otherwise, you could make the data on the disk inaccessible.

Start Disk Editor

See "Create and use Rescue Disks" on page 70.

Disk Editor is a DOS program. You can start it in the Norton Utilities subdirectory of the installed Norton SystemWorks folder, or when you have restarted from Rescue Disks or Emergency Disks.

Disk Editor works on disks that have been formatted with the DOS FAT system. It is not designed to work with disks that have been formatted with NTFS file systems.

The following procedures describe the ways you can start Disk Editor.

To start Disk Editor from the Norton SystemWorks Professional Edition CD

1. Insert the Norton SystemWorks Professional Edition CD into the CD-ROM drive.
2. Click **Browse CD**.

3 Double-click the **Norton Utilities** folder.

4 Double-click **DISKEDIT.EXE**.

To start Disk Editor from the installed Norton SystemWorks Professional Edition folder

1 In Windows Explorer, double-click the **Norton SystemWorks Professional Edition** folder.
Unless you selected a different path during installation, the installation path is C:\Program Files\Norton SystemWorks.

2 In the Norton SystemWorks folder, double-click the **Norton Utilities** folder.

3 Double-click **DISKEDIT.EXE**.

To start Disk Editor using Rescue Disks

1 Insert the Rescue Boot Floppy Disk into the startup drive.

2 Turn on your computer and wait for the Rescue Disk screen to appear.

3 Press **Esc** to go to the DOS command prompt.

4 Remove the Rescue Boot Floppy Disk.

5 Insert Emergency Utilities Disk 1, which contains the DISKEDIT.EXE file, into the startup drive.

6 At the command prompt, type **DISKEDIT**, then press **Enter**.

By default Disk Editor starts in read-only mode.

Change from read-only mode

Disk Editor always starts in read-only mode. Before doing anything else, change the Disk Editor settings so that you can save the data that you find.

To change from read-only mode when starting Disk Editor from Windows

See "Start Disk Editor" on page 247.

1 Start Disk Editor.

2 On the Disk Editor Tools menu, click **Configuration**.

3 Uncheck **Read Only**.

To change from read-only mode when starting Disk Editor in DOS

1 Start Disk Editor from the DOS command line.

2 Type the following:
DISKEDIT /W

3 Press **Enter**.

4 When the Volume Lock message appears, press **Enter**.

Recover an unbootable hard disk

You may not be able to start up from a hard disk for two major reasons:

- The first reason is the absence or corruption of the two *hidden* system files (IO.SYS and MSDOS.SYS for MS-DOS) or the absence or corruption of COMMAND.COM, the default command processor. If you have been using a third-party replacement (such as NDOS.COM, 4NT.EXE, or 4DOS.COM) for COMMAND.COM, corruption or absence of those files also can cause startup problems.
- The second reason is when the value of the partition table field called Boot is modified to "NO." This tells Windows that a partition is not a startup partition, even if the partition actually is. Disk Editor can edit the partition table to mark a partition as the startup partition.

If you have not created Rescue Disks, you can try to recover an unbootable hard disk using Disk Editor and Emergency Disks. See "Recover an unbootable hard disk with Emergency Disks" on page 250.

Recover an unbootable hard disk with Rescue Disks

See "Create and use Rescue Disks" on page 70.

If you have created Rescue Disks, you can use them to start your computer and then use Disk Editor to recover an unbootable hard disk.

To recover an unbootable hard disk with Disk Editor and Rescue Disks

1 Insert the Rescue Boot Floppy Disk into the startup drive.

2 Turn on your computer and wait for the Rescue Disk screen to appear.

3 Press **Esc** to go to the DOS command prompt.

4 Remove the Rescue Boot Floppy Disk.

5 Insert Emergency Utilities Disk 1, which contains the DISKEDIT.EXE file, into the startup drive.

6 At the command prompt, type **DISKEDIT /W**, then press **Enter**.
The Volume Lock message appears.

7 Press **Enter**.

8 On the Object menu, click **Drive**.
The Select The Disk You Wish To Edit dialog box appears.

9 Select the disk with the partition you want to mark as the startup partition, then press **Enter**.
The Volume Unlock message appears.

10 Press **Enter**.
Disk Editor scans the disk.

11 On the Object menu, click **Partition Table**.

12 Press **Y** to toggle the value in the Boot column to Yes.

13 On the Edit menu, click **Write Changes**.
The Write Changes dialog box appears.

14 Click **Write** to write the change.

15 On the Object menu, click **Exit** to quit Disk Editor.

16 Restart your computer.

Recover an unbootable hard disk with Emergency Disks

See "Create Emergency Disks" on page 28.

You can also recover an unbootable hard disk using Disk Editor and Emergency Disks. If you haven't already created Emergency Disks, you can use any computer to create them.

To recover an unbootable hard disk with Disk Editor and Emergency Disks

1 Insert Emergency Disk 1 into the startup drive.

2 Turn on your computer and wait for the Norton Utilities screen to appear.

3 Use the UpArrow and DownArrow keys to select **Disk Editor**.

4 At the prompt, type **/W**, then press **Enter**.

5 When prompted, insert Emergency Disk 2, then press **Enter**.

6 On the Object menu, click **Drive**.
The Select The Disk You Wish To Edit dialog box appears.

7 Select the disk with the partition you want to mark as the startup partition, then press **Enter**.

8 On the Object menu, click **Partition Table**.

9 Press **Y** to toggle the value in the Boot column to Yes.

10 On the Edit menu, click **Write Changes**.
The Write Changes dialog box appears.

11 Click **Write** to write the change.

12 On the Object menu, click **Exit** to quit Disk Editor.

13 Restart your computer.

Recover lost subdirectories from a corrupt directory

Directories are special kinds of files that contain file and directory information. These special files can become corrupted and unreadable if the cluster they reside in is damaged.

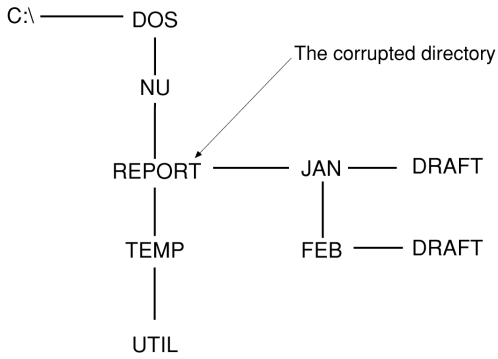
When a directory is unreadable, the files and directories it contains are inaccessible. Norton Disk Doctor considers them lost clusters instead of files and directories.

About directory structure

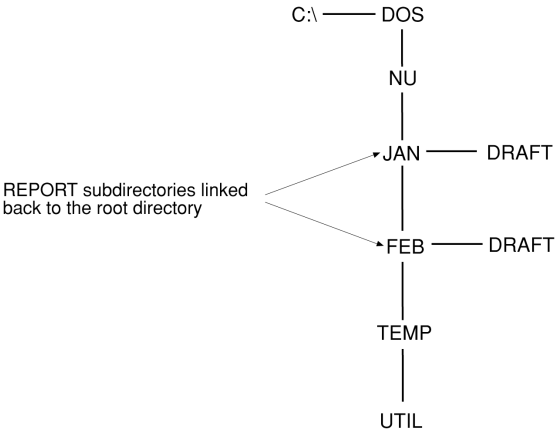
The Sample directory structure below shows a directory structure before one of its directories, REPORT, becomes unreadable.

Sample directory structure

Assume the cluster the REPORT directory occupies is physically damaged and is no longer readable. All directories and files contained in REPORT are inaccessible. Disk Editor can link the lost directories back to the root directory, as shown in the Repaired directory structure.



Repaired directory structure



Recovery methods

Track information on paper as you complete the following procedures by creating three columns. Label them as follows:

- Corrupt directory cluster number
- Good sectors
- Lost directories

To recover subdirectories from a corrupt directory, use the following procedures.

Action	For more information
Locate clusters for the corrupt directory.	See "To locate the cluster for the corrupt directory" on page 253.
Find readable sectors.	See "To find all of the readable sectors" on page 253.
Copy good entries to the root directory.	See "To copy the good entries to the root directory" on page 254.
Find lost directories.	See "To find lost directories" on page 255.

Action	For more information
Link lost directories to the root directory.	See "To link the lost directories to the root directory" on page 255.
Adjust parent directory pointers.	See "To adjust the parent directory pointers within each recovered directory" on page 256.

To locate the cluster for the corrupt directory

See "Start Disk Editor" on page 247.

1 Start Disk Editor.

2 On the Object menu, click **Drive**.
The Select The Disk You Wish To Edit dialog box appears.

3 Select the drive with the corrupt directory and press **Enter**.
Disk Editor scans the disk.

4 On the Object menu, click **Directory**.
The Change Directory dialog box appears.

5 Select the parent of the corrupt directory and press **Enter**.
The Disk Editor screen displays the contents of the directory in the Directory View.

6 Select the corrupt directory and press **Enter**.
In most cases, you get read errors immediately after you press Enter. Usually only one or two sectors that make up the cluster are damaged, letting you read the remaining good sectors. The good sectors cut down your workload, since you can copy the data within them to the root directory.
You will have to re-create the data in the corrupt sectors. See "To find lost directories" on page 255.

7 Record the number shown in the Cluster field for the corrupt directory's entry on the piece of paper in the "Corrupt directory cluster number" column.
Disk Editor tries to read the cluster the corrupt directory occupies.

Usually only one or two sectors are damaged, letting you read the remaining good sectors.

To find all of the readable sectors

1 If you immediately get a read error from Disk Editor, press **Enter** to clear the message.

2 Press **PageDown** to read the next sector of the cluster.

3 Record the good sector number on the piece of paper in the "Good sectors" column.
The current sector number is displayed at the beginning of each sector in logical mode.

4 Continue pressing **PageDown** until you reach the end of the cluster or cannot advance past the read errors.

Using the good sector numbers, you can relocate the valid entries to the root directory.

To copy the good entries to the root directory

1 Choose **Sector** from the Object menu.
The Select Sector Range dialog box appears.

2 Type the first sector number from your "Good sectors" list into both the Starting Sector and Ending Sector text boxes and press **Enter**.
Disk Editor displays the sector in Directory View.

3 Choose **As Directory** from the View menu.

4 Choose **Mark** from the Edit menu.

5 Select all the valid entries and exclude entries labeled "Unused Directory Entry."

6 Choose **Copy** from the Edit menu to copy the selected entries to the Disk Editor Clipboard.

7 Choose **Directory** from the Object menu.
The Change Directory dialog box appears.

8 Press **Enter** to select the root directory.
Disk Editor displays the root directory in Directory View.

9 Select the first entry labeled "**Unused Directory Entry**."

10 Choose **Paste Over** from the Edit menu to append the directory entries from the Clipboard to the root directory.

11 Choose **Write Changes** from the Edit menu.

12 Repeat the above procedure for all the sectors you recorded.

Use Disk Editor to locate all the top-level directories you want to recover. Once the directories are found, Disk Editor can link them back to the root directory.

To find lost directories

1. Choose **Cluster** from the Object menu.
   The Select Cluster Range dialog box appears.
2. Type **2** in the Starting Cluster text box and press **Enter**.
3. Choose **Find Object** from the Tools menu and choose **Subdirectory** from the submenu.
   Disk Editor searches for the cluster string.
4. When Disk Editor finds the search string, choose **As Directory** from the View menu.
5. Do one of the following:
   - If the screen does not resemble the contents of a directory, choose **Find Again** from the Tools menu until the information on the screen does resemble a directory.
   - If the screen does resemble a directory, look at the number in the Cluster field for the ". . " (two periods followed by six spaces) entry. If this number is the same as the number you recorded for the "Corrupt directory cluster number," record the number next to the Cluster label on the status line on the piece of paper in the "Lost directories" column.
6. Choose **Find Again** from the Tools menu and repeat step 5 to search for additional lost directories until you locate all the top-level child directories you want to recover.

Once lost directories are found, Disk Editor can link them back to the root directory.

To link the lost directories to the root directory

1. Choose **Directory** from the Object menu.
   The Change Directory dialog box appears.
2. Select the root directory and press **Enter**.
   Disk Editor displays the root directory in Directory View.
3. Select the first entry labeled "**Unused Directory Entry**."
4. Type a unique name for the current top-level directory in the Name field.
5. Type **0** in the Size field.
6. Type the current date and time in the Date and Time fields.
7. In the Cluster field, type the cluster number for the lost directory you are currently working with from the "Lost directories" column.

8 With the cursor in the “D” column, press the space bar to toggle the directory attribute on.

9 Repeat the above procedure for all of the lost directories in the “Lost directories” column.

10 Choose **Write Changes** from the Edit menu and press **Enter**.
The Write Changes dialog box appears.

11 Select **Write** to write the change.
You have recovered the directories.

Disk Editor allows you to rebuild the directory structure by adjusting the directory pointers within each recovered directory.

To adjust the parent directory pointers within each recovered directory

1 Select one of the recovered directory entries and press **Enter**.
You should see the contents of the directory with the first two entries being “.” and “..”.

2 Type **0** in the Cluster field for the “..” entry.

3 Choose **Write Changes** from the Edit menu and press **Enter**.
The Write Changes dialog box appears.

4 Press **Enter** to write the change.

5 Select the “..” entry once again and press **Enter**.
This confirms the link by returning you to the root directory and puts you where you need to be for the next recovered directory.

6 Repeat the above procedure for each of the recovered directories.

Use Norton Disk Doctor to clean up any lost clusters left on your disk. If you save the lost clusters as files, you can examine these files and recover any additional lost files. Simply rename the files you want and delete the rest. Norton Disk Doctor uses the file naming scheme FILE0000._DD, FILE0001._DD, and so on for the file names representing lost clusters.

Now that you have recovered the directories, re-create the directories they originally resided in and move them back. You do not have to worry about the directories being re-created in the same spot. Thanks to Norton Disk Doctor, Windows avoids the bad area on the disk.

Lift data from a damaged hard disk

Extracting data from a disk is a time-consuming process, so you should only try to recover files that you have not backed up or do not have copies

of elsewhere. Reinstall any program files from their original disks rather than trying to recover them with Disk Editor from a corrupt hard disk.

Neither Windows nor Norton Disk Doctor can access a corrupt disk. However, Disk Editor can access most bad disks and let you “lift” the data they contain.

About bad disk problems

There are two classes of bad disk problems:

Logical problems	Involve write errors that result in scrambled data on the disk. Fortunately, Norton Disk Doctor fixes most of these problems for you automatically.
Physical problems	Usually involve physically damaged sectors in the partition table, boot record, the first copy of the file allocation table (FAT), any combination of these system areas, or even the entire disk. When sectors in the system areas become physically damaged, Windows cannot access the disk normally. Since even Norton Disk Doctor usually cannot repair physically damaged sectors, you may never gain normal access to a disk with damaged sectors in the system area unless you perform a low-level format. However, traditional low-level formatters for older hard disks destroy the existing data and do not work with today’s sector-translating IDE, SCSI, and ESDI hard disks. If the disk is physically damaged it will need to be repaired by a qualified service center.

Error 129 indicates that a disk is physically damaged and that no recovery is possible using Norton Utilities DOS tools.

Disk Editor classifies a disk as either a logical or a physical disk. If a disk can be accessed as a logical disk, Disk Editor uses clusters, usually composed of four or more sectors, as the smallest data allocation units. This makes manual recovery easier. Disk Editor treats severely damaged disks as physical disks automatically.

Disk Editor lets you access data around the damaged areas, cluster by cluster, file by file. This way, you can recover critical data files that you have not backed up and cannot afford to do without.

Data recovery procedures

To lift data from a corrupt or physically damaged hard disk, use the following procedures.

Action	For more information
Identify the disk type.	See "Determine whether Disk Editor is accessing your disk as a logical or physical disk" on page 258.
If the disk is being accessed as a logical disk, extract data.	See "Extract data from a logical disk" on page 259.
If the disk is being accessed as a physical disk, extract clusters.	See "Extract clusters from a physical disk" on page 260.
Find more lost clusters.	See "Find the rest of the clusters" on page 263.

Once you fix the problem, make sure that a virus is not causing the problem.

Determine whether Disk Editor is accessing your disk as a logical or physical disk

Disk Editor estimates the correct values of your disk's physical and logical parameters. The number of sides, *cylinders*, sectors, and so on are inserted into the appropriate fields of the Advanced Recovery Mode dialog box automatically and used to treat the disk as a logical disk.

If the disk's parameters are incorrect, the resulting logical disk may have structural problems. If you consistently run into problems accessing the disk, reenter the disk's physical and logical parameters into the Advanced Recovery Mode dialog box. For example, if you select the first copy of the FAT but do not see it, the number of total sectors may be incorrect.

To determine whether Disk Editor is accessing your disk as a logical or physical disk

See "Start Disk Editor" on page 247.

1. Start Disk Editor.
2. Choose **Drive** from the Object menu.
   The Select The Disk You Wish To Edit dialog box appears.
3. Select **Logical Disks** from the Type box.

4 Do one of the following:

- If the bad disk can be accessed as a logical disk, you should see the disk listed in the drives list box and you can proceed.
  See "Extract data from a logical disk" on page 259.
- If the bad disk is not listed in the drives list box, continue with the next step.

5 Choose **Advanced Recovery Mode** from the Tools menu.
The Advanced Recovery dialog box appears.

6 Press **Alt+R**.
The Select The Disk You Wish To Review dialog box appears.

7 Select the bad disk and press **Enter**.
The Advanced Recovery dialog box reappears.

8 Press **Alt+V**.
Disk Editor rescans the disk as a logical disk. When scanning is complete, you should see the root directory of the disk in Directory View.

If you cannot see the root directory of the disk in Directory View, do not continue. The following procedures will not work.

Extract data from a logical disk

If Disk Editor can access your bad disk as a logical disk directly or by using Advanced Recovery Mode, use the following procedure. To recover a file, you must find, select, and write it out to another disk.

To extract data from a logical disk

1 Choose **Directory** from the Object menu.
The Change Directory dialog box appears.

2 Select the directory that contains the file you want to recover and press **Enter**.
The directory listing appears in Directory View.

3 Find the file in the directory listing, then do one of the following:

- If the file exists, write the file out as described in step 4.
- If the file does not exist in this directory, try looking in other directories.

4 Select the name of the file you want to recover and press **Enter**.
The contents of the file appear in Hex View.

5 Choose **Write Object To** from the Tools menu.
The Write dialog box appears.

6 Select **To A File** and press **Enter**.
The Save dialog box appears.

7 Remove your disk from the drive and insert the disk to which you want to write.

8 Type a drive letter followed by a file name in the text box and press **Enter**.
A confirmation box appears asking if you want to write the file out.

9 Select **Yes** to continue.
A "Copying…" progress box appears for the duration of the copy function.

10 Repeat this procedure for each of the files you want to recover.

Extract clusters from a physical disk

When Disk Editor cannot access the disk as a logical disk, you can still lift individual clusters, starting with the first cluster of the file. This is possible because the Virtualize command button in the Advanced Recovery Mode dialog box lets Disk Editor work with clusters instead of sectors.

To extract clusters from a physical disk

❖ Try each of the following methods in the order listed:

- Search for the file name. See "Method 1: Find the starting cluster by searching for the file name" on page 260.
- Browse all directories. See "Method 2: Find the starting cluster by browsing all directories" on page 261.
- Search for text within a file. See "Method 3: Search for unique text in the file" on page 262.

Method 1: Find the starting cluster by searching for the file name

When the directory structure of a disk is still intact, you can find the starting cluster number by searching the disk for the directory entry of the file, which contains the starting cluster number.

To find the starting cluster by searching for the file name

1 Choose **Cluster** from the Object menu.
The Select Cluster Range dialog box appears.

2 Type **2** in the Starting Cluster text box and press **Enter**.

3 Choose **Find** from the Tools menu.
The Enter Search Text dialog box appears.

4 Type the file name in the ASCII text box and press **Enter**.
Do not type the file name in the regular format. Instead, type the file name followed by enough spaces to make eight characters. Then, type the file extension as the next three characters. Do not put a period between the name and the extension. For example, type NAME.EXT as:
NAME****EXT (do not type the asterisks)
There are four spaces between NAME and EXT because NAME has four characters already. The Search Progress dialog box appears. Disk Editor finds the search string, selects it, and displays it in Hex View.

5 Choose **As Directory** from the View menu to switch to Directory View.

6 Do one of the following:

- If the data you see appears to be a directory, record the file name, starting cluster number, and file size of the file from those fields on a piece of paper labeled “Files To Recover.”
  The starting cluster number is the number in the Cluster field on the same line as the file name.
- If the data contains unrecognizable characters, such as happy faces, hearts, and other nonstandard characters, search for another occurrence of the file name by choosing **Find Again** from the Tools menu.

7 Find and record the starting cluster numbers and file sizes for all the files you want to recover.
Then find the rest of the clusters for each file. See “Find the rest of the clusters” on page 263.

Method 2: Find the starting cluster by browsing all directories

You can locate the file you want to recover by browsing through all directories on the disk. To locate all directories on the disk except the root directory, search for “.. ” (two periods followed by six spaces). Every directory other than the root has “.. ” as its second entry. As you find each directory, scan the directory listing for the file you want to recover.

To find the starting cluster by browsing all directories

1 Choose **Cluster** from the Object menu.
The Select Cluster Range dialog box appears.

2 Type **2** in the Starting Cluster text box and press **Enter**.

3 Choose **Find Object** from the Tools menu.

4 Choose **Subdirectory** from the submenu.
The Search Progress dialog box appears.

5 Once the search completes, choose **As Directory** from the View menu to switch to Directory View.

6 Do one of the following:

- If the display is a directory and the file you want to recover is listed, record the name, starting cluster number, and size of that file on a piece of paper labeled "Files To Recover."
- If the display is not a directory or you cannot locate the file you want to recover, choose **Find Again** from the Tools menu to continue searching for more directories.

If this method is unsuccessful, try method three below, which searches for a unique text string that appears in the starting cluster of the file.

Method 3: Search for unique text in the file

When the directory structure is damaged, the best way to find the starting cluster is to search for embedded text in the starting cluster. This method works best for text files such as word processing files.

To search for unique text in the file

1 Choose **Cluster** from the Object menu.
The Select Cluster Range dialog box appears.

2 Type **2** in the Starting Cluster text box and press **Enter**.

3 Choose **Find** from the Tools menu.
The Enter Text To Search For dialog box appears.

4 Type a unique string that appears at the beginning of the file in the ASCII text box and select **Find** to begin the search.
For example, if you are looking for a word processor file with the title "Year End Report," type the string "Year End Report" in the text box.
If found, Disk Editor displays the search string in Hex View.

5 Choose **As Text** from the View menu to switch to Text View.

6 Do one of the following:

- If the cluster that contains the string appears to be the first cluster in the file, record the starting cluster's number and a name for the file on a piece of paper labeled "Files To Recover." Mark the number and name as the starting cluster.

- If the cluster that contains the string belongs to the file but does not appear to be the first cluster, record the cluster number on the same piece of paper next to the file name. Do not mark the number as the starting cluster.
- If the cluster with the search string does not belong to the file you are looking for, choose **Find Again** from the Tools menu to continue the search. If you have not found any clusters from your file, try searching for a different text string.

Find the rest of the clusters

Now that you have found the starting cluster, you need to find the rest of the clusters in the file. If you found the starting cluster, the file name, and the file size using method one or method two in "Extract clusters from a physical disk" on page 260, use method one of this section. Otherwise, use method two of this section. Your choices are:

- See "Method 1: Find the rest of the clusters with the file size" on page 263.
- See "Method 2: Find the rest of the clusters without the file size" on page 265.

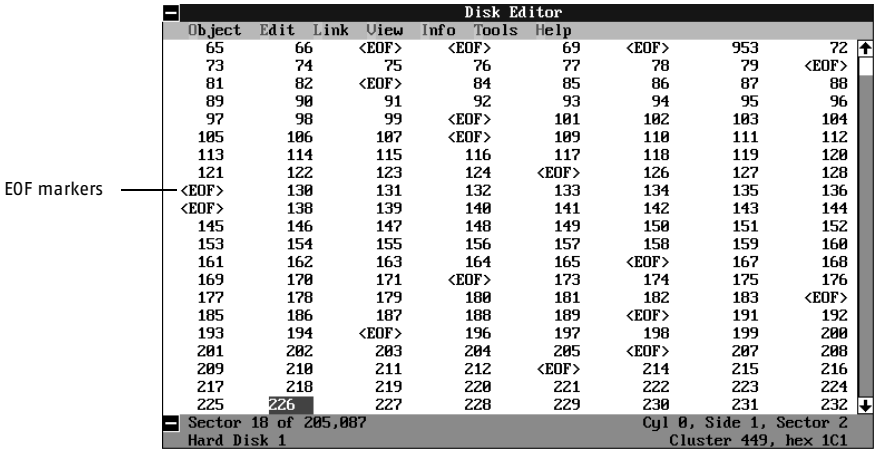
Method 1: Find the rest of the clusters with the file size

With the file size, you can calculate the number of clusters the file contains. Then you can locate and record the individual clusters that you later write out to a file.

To find the rest of the clusters with the file size

1. Choose **Drive Info** from the Info menu.
   The Drive Info dialog box appears.
2. Multiply the values for Bytes Per Sector and Sectors Per Cluster.
   The result is the size of each cluster in bytes.
3. Divide the file size by the cluster size.
4. Round off the value to the next integer value.
   For example, if the file size is 100,000 bytes and your disk's cluster size is 8196 bytes, the file has thirteen clusters (12.2 rounded up to 13).

5 Choose **1st FAT** from the Object menu.
If you cannot find the FAT or if it is very corrupt, continue to the next step.



6 Use the PageDown and Tab keys until the Cluster label on the status line matches the starting cluster number of the file you want to recover.
When you find the starting cluster, its position on the screen (not Disk Editor's status line) should display <EOF>, which marks the last cluster in the file or the number for the next cluster. If it is marked <EOF>, you have found the first and last cluster of the file. You can write the cluster to disk as described below.

7 If it has the cluster number of the next cluster in the file, use the PageDown and Tab keys to move to that cluster and select it.
Remember to use the Cluster label on the status line as the cluster number reference.

8 Record the number indicated by the Cluster label on the status line next to the file name on your "Files To Recover" list.
Unless the file is composed of multiple cluster chains, the next cluster is usually immediately to the right of the current cluster. If this cluster position is marked with <EOF>, it is the last cluster of the file. You can write the cluster to disk. See "To write the clusters to disk" on page 266.

9 Continue finding and recording clusters for the file until you find the <EOF> marker.

10 Compare the number of clusters you recorded from the FAT with the number you calculated earlier (by dividing the file size by the cluster size), then do one of the following:

- If they are not the same, double-check your calculations or try this procedure again.
- If they are the same, you can write the clusters to disk by choosing **Cluster** from the Object menu.

Method 2: Find the rest of the clusters without the file size

Unless the disk is very *fragmented*, the rest of the clusters of the file should be near and after the starting cluster. Locate the rest of the file by browsing near the starting cluster or search for text that appeared somewhere after the starting cluster. This procedure works best for text files.

To find the rest of the clusters without the file size

1 Choose **Cluster** from the Object menu.
The Select Cluster Range dialog box appears.

2 Type the starting cluster number from your "Files To Recover" list in the Starting Cluster text box and press **Enter**.
Disk Editor displays the contents of the starting cluster in Hex View.

3 Choose **As Text** from the View menu.

4 Scroll to the next cluster using the PageDown and DownArrow keys.
The cluster markers on the screen (not on the status line) differentiate cluster numbers.

5 When you find a cluster belonging to the file, record the cluster number displayed next to the Cluster label on the status line on your "Files To Recover" list.
Record the number next to the name of the file to which the cluster belongs.

6 Using the data in the newest cluster to figure out what should be in the next cluster, continue browsing for clusters until you have found the expected number of clusters for the original file.

7 Do one of the following:

- If you have found all the clusters from the original file, write the clusters to a new location. See "To write the clusters to disk" on page 266.
- If you could not locate additional clusters near the starting cluster, continue the search by searching for text. See "To search for text on the disk" on page 266.

8 Press the **Home** key once.
Disk Editor returns to the starting cluster.

To search for text on the disk

1 Choose **Find** from the Tools menu.
The Enter Search Text dialog box appears.

2 Type the text to search for in the ASCII text box and select **Find** to begin the search.

3 When the search string is found, record the cluster number that contains the search string if the number belongs to the file on your "Files To Recover" list.

4 Record the number next to the name of the file to which the cluster belongs.

5 Start a new search for text you expect to be in the next cluster or manually browse the next several clusters for the next cluster using the PageDown and DownArrow keys.

6 If no clusters are found, choose **Find** from the Tools menu and type a new search string.

7 Continue searching until you have reached the expected end of the file.

To write the clusters to disk

1 Choose **Cluster** from the Object menu.
The Select Cluster Range dialog box appears.

2 Type the starting cluster number of the first file name from your "Files To Recover" list into both the Starting Cluster and Ending Cluster text boxes and press **Enter**.

3 Choose **Write Object To** from the Tools menu.
The Write dialog box appears.

4 Select **To A File** and press **Enter**.
The Write Object To File dialog box appears.

5 Insert a blank floppy disk into either drive A or drive B.

6 Type the drive letter of the drive that contains the blank floppy disk, followed by a file name for the file created with the clusters you have found and press **Enter**.
For example, A:MYFILE.DOC.
A confirmation dialog box appears asking if you want to write the file out.

7 Click **Yes**.
The write progress screen appears for the duration of the write operation.

8 Repeat steps 1 through 7 for each cluster in your “Files To Recover” list and when you get to step 6, use the same file name.
This causes a message box to appear, telling you the file already exists.

9 Press **Enter** to append the file.

Repair cross-linked files

When Norton Disk Doctor or ScanDisk examines a disk, it might report that two or more files are reported to be cross-linked. When two or more (usually only two) files are cross-linked, they are sharing the same cluster or *chain* of clusters. The cross-linkage can take place anywhere along the cluster chain, not just on the first or last cluster.

Since each cluster can only belong to one file at a time, one of the cross-linked files is unusable until you eliminate the cross-linkage. Furthermore, one of the cross-linked files is almost always the real owner of the cross-linked clusters. Usually, you can recover the missing clusters for the other file as lost clusters and link them into the correct file.

First, you need to identify the files that are cross-linked and the clusters on which they are cross-linked.

To repair cross-linked files

❖ Do one of the following:

- See “To identify and recover cross-linked files with Norton Disk Doctor” on page 268.
- See “To examine the clusters to see where they belong” on page 270.
- See “To link a _DD or CHK file back to the corrupt file to which it belonged” on page 270.

If you cannot access Windows or your computer will not start, you can try using Emergency Disks. See “To identify cross-linked files with Norton Disk Doctor and Emergency Disks” on page 269.

This procedure helps you identify matching parts of cross-linked files.

To identify and recover cross-linked files with Norton Disk Doctor

See "Check your disk with Norton Disk Doctor" on page 149.

1. Start Norton Disk Doctor.
2. Check the disk to diagnose and click **Diagnose**.
3. Follow the directions to continue.

Do not make any corrections to the disk yet.

4. When Norton Disk Doctor locates the cross-linked files, record their names.
5. Copy the cross-linked files to another disk.
   If a file is too big, you can copy it to another directory, though this is not preferred.
6. Verify whether the files you copied (not the original file) are corrupt, then do one of the following:
   - For a data file, open it with the application that created the data file (or one that at least recognizes the type of data in the file).
   - For a program file, try running it.
7. Delete the cross-linked files from the original disk.
8. Copy the good files back to the same directory of the original disk.
9. Copy the corrupt files back to the same directory of the original disk.
10. In Norton Disk Doctor, check the drive to diagnose and click **Diagnose**.
11. Follow the directions to continue and let Norton Disk Doctor make any corrections necessary to the disk.
    Norton Disk Doctor saves chains of lost clusters to the root directory as files with _DD extensions. For example, five lost cluster chains would be saved as FILE0000._DD, FILE0001._DD, and so on to FILE0004._DD. ScanDisk uses the same naming convention as Norton Disk Doctor, except the extension CHK is used instead of _DD.

The next step is to examine clusters. See "To examine the clusters to see where they belong" on page 270.

To identify cross-linked files with Norton Disk Doctor and Emergency Disks

1. Insert Emergency Disk 1 into the startup drive.
2. Turn on your computer and wait for the Norton Utilities screen to appear.
3. Use the UpArrow and DownArrow keys to select Norton Disk Doctor and press **Enter**.
   The Norton Disk Doctor main dialog box appears.
4. Press **Enter** to diagnose the disk.
   The Select Drives To Diagnose dialog box appears.
5. Select the drive to diagnose and press **Enter**.
6. Follow the directions to continue.

Do not make any corrections to the disk yet.

7. When the cross-linked files are located, record their names.
8. Copy the cross-linked files to another disk.
   If a file is too big, copy it to another directory, though this is not preferred.
9. Verify whether the files you copied (not the originals) are corrupt, then do one of the following:
   - For a data file, open it with the application that created the file (or one that at least recognizes the type of data in the file).
   - For a program file, try running it.
10. Delete the cross-linked files from the original disk.
11. Copy the good files back to the same directory of the original disk.
12. Copy the corrupt files back to the same directory of the original disk.
13. Restart your computer.
14. Insert Emergency Disk 1 into the startup drive.
15. Turn on your computer and wait for the Norton Utilities screen to appear.
16. Use the UpArrow and DownArrow keys to select Norton Disk Doctor and press **Enter**.
    The Norton Disk Doctor dialog box appears.
17. Select **Diagnose Disk** and press **Enter**.
18. Check the drive to diagnose and press **Enter**.

19 Follow the directions to continue and let Norton Disk Doctor make any corrections necessary to the disk.
Norton Disk Doctor saves chains of lost clusters to the root directory as files with _DD extensions. For example, five lost cluster chains would be saved as FILE0000._DD, FILE0001._DD, and so on to FILE0004._DD. ScanDisk uses the same naming convention as Norton Disk Doctor, except the extension CHK is used instead of _DD.

To examine the clusters to see where they belong

See "Start Disk Editor" on page 247.

1 Start Disk Editor with the /W command-line option.

2 Choose **Drive** from the Object menu.
The Select The Disk You Wish To Edit dialog box appears.

3 Select the disk that contains the _DD or CHK files using the UpArrow and DownArrow keys and press **Enter**.
The root directory of the disk displays in Directory View. You may not see the _DD or CHK in the directory listing immediately.

4 Use the UpArrow and DownArrow keys to scroll up and down the listing to locate the files. (Use the PageUp and PageDown keys to scroll a screen at a time.)

5 Select a _DD or CHK file and press **Enter**.
The contents of the file appear in Hex View.

6 If the file is a text file, choose **As Text** from the View menu.

7 If you know which corrupt file the data belongs to, do one of the following:

- Return to the root directory by choosing **Directory** from the Link menu.
- Select another _DD or CHK file.

8 Record the file name, file size, and starting cluster number of the _DD or CHK file on a piece of paper.
The starting cluster number for each _DD or CHK file is in the Cluster field on the same line as the _DD or CHK file name.

9 Repeat steps 5 through 8 for each of the _DD or CHK files in your root directory.

To link a _DD or CHK file back to the corrupt file to which it belonged

1 Choose **Directory** from the Object menu.
The Change Directory dialog box appears.

2 Select the directory containing the corrupt file and press **Enter**.
The directory appears.

3 Select the corrupt file and press **Enter**.
The file is displayed in Hex View.

4 Scroll through the file until you notice a discontinuity.
Note the cluster that the cursor is in by using the value in the status bar and press **Enter** to return to the directory.

5 Add the size of the _DD or CHK file to the size of the corrupt file and type the total in the Size field for the corrupt file.

6 Press **Ctrl+W** to write the changes and select **Write**.

7 Press **Ctrl+T** to view the cluster chain for the file.

8 Select the cluster noted on the status line in step 4 and note its value.

9 Type the cluster number you recorded on paper for the _DD or CHK file here and press **Ctrl+W**.

10 Make sure Synchronize FATs is checked in the dialog box and select **Write**.

11 When the Rescan dialog box appears, click **Cancel**.

12 Move the cursor to the cluster for the _DD or CHK file in the current view.

13 Use the Tab and DownArrow keys to traverse the cluster chain for this file until you reach <EOF>.

14 Change <EOF> to the value noted in step 8.

15 Press **Ctrl+W** and press **Enter**.
The Rescan dialog box appears.

16 Choose **Directory** from the Object menu.
The Change Directory dialog box appears.

17 Select the root directory and press **Enter**.

18 Move to the Name field of the _DD or CHK file and press **F2** to display the Hexadecimal view.

19 Without moving the cursor, type **E5**.

20 Press **Ctrl+W** to write the change and then select **Write**.
The files should now be fully recovered.

21 Open Norton Disk Doctor and diagnose the affected drive to validate the corrections you made.

Glossary

access rights	The types of operations and files a user or group can access and what the user or group is permitted to do with those directories and files.
ActiveX control	A program that runs within a browser using Microsoft technology to add life to a Web page by using animation, streaming audio and video, movies, and so on. When you visit a Web page that contains an ActiveX control, it is dynamically downloaded and saved to your hard disk. Unlike Java applets, ActiveX controls don't run in a restricted environment, and have the potential to take control of your computer.
administrator	1. A person who oversees the operation of a network. 2. A person responsible for installing programs on a network and configuring them for distribution to workstations. This person may also update security settings on workstations.
alert	A dialog box that appears in a graphical user interface (GUI) to signal that an error has occurred, or to provide a warning.
boot record	A sector at the beginning of each disk that identifies the disk's architecture (sector size, cluster size, and so on). For startup disks, the boot record also contains a program that loads the operating system.
bootable disk	A disk that can be used to start a computer.

browser	A software application that makes navigating the Internet easy by providing a graphical user interface. This lets the user click menus, icons, or buttons rather than learn difficult computer commands. Also called a Web client.
cache	A location on your disk in which data is stored for reuse. A Web browser cache stores Web pages and files (such as graphics) as you view them.
cache file	A file used to improve the performance of Windows.
chain	When parts of a single file are stored in noncontiguous clusters on a disk, the FAT entries for each cluster (except the last) in the file point to the next sequential cluster storing the file's data. The file is said to be stored in a chain of clusters, and the FAT entries are said to form a FAT chain.
clone	An exact duplicate used to refer to both hardware configurations and software configurations on a disk. Cloning a disk replicates not only the software on the disk, but also the exact position on the disk.
cookie	A small data file that some Web sites place on your hard disk while you're viewing a Web page. Web servers can use cookies to store your personal information and preferences so that you don't need to reenter them each time that you visit.
compressed file	A file that has been compressed using a special data storage format in order to save space on your disk.
crash	When a computer program or operating system stops working and must be restarted. Symptoms of a crash include a system error message, an apparently frozen screen, or unusual behavior that is disruptive to the operation of the computer or program.
cylinder	The parameter that, along with heads and sectors, defines the size of a disk.
dial-up networking	A connection in which a computer calls a server and operates as a local workstation on the network.

domain	The common address for a single company or organization (such as symantec.com) on the Internet, which might have multiple hosts.
DOS window	A method of accessing the MS-DOS operating system to execute DOS programs through the Windows graphical environment.
download	To transfer a file from one computer system to another, through a modem or network. Download usually refers to the act of transferring a file from the Internet, a BBS (bulletin board system), or a service such as America Online.
driver	Software instructions for interpreting commands for transfer to and from peripheral devices and the CPU.
email (electronic mail)	A method of exchanging messages and files with other people via computer networks. A popular protocol for sending email is SMTP (Simple Mail Transfer Protocol). Popular protocols for receiving email are POP3 (Post Office Protocol 3) and IMAP4 (Internet Message Access Protocol 4). Web-based email services use HTTP (Hypertext Transfer Protocol) for sending and receiving email.
executable file	A file containing program code that can be launched. Generally includes any file that is a program, extension, or a system file.
extension	The three-letter ending on a file name that can associate the file with an activity or program, so that double-clicking the file causes the program to start. Examples include .txt (text) and .exe (programs).
file type	A code that is stored in each file that associates it with a program or activity.
fragment	A noncontiguous cluster containing a portion of a file. When the data that makes up a file is stored in noncontiguous locations across a disk, the file is said to be fragmented. Fragmented information takes longer to read from the disk than unfragmented information.

hidden attribute	An attribute that is assigned to critical files to make them harder to access and more difficult to delete than other files. The hidden attribute prevents files from displaying in a DOS or Windows directory list.
HTML (Hypertext Markup Language)	A standard language for documents on the World Wide Web. Codes inserted in a text file instruct the Web browser on how to display a Web page's words and images for the user, and define hypertext links between documents.
hyperlink	A reference from a point in one Web document to another place in the same document or another document. Links are usually distinguished by underlining or colored text. When you click the link, the target reference appears in the Web browser status bar.
icon	A graphic symbol used to represent a file, folder, disk, or other entity.
image file (Norton Ghost)	A file created using Norton Ghost. An image file of a disk or partition is created and used to create duplicates of the original disk or partition.
image file (Norton Utilities)	A file that contains an exact copy or image of a drive or partition. This file is used for recovery or cloning purposes, replicating the drive or partition contents exactly.
infected file	A file that contains a virus.
Internet address	A 32-bit numeric identifier that uniquely identifies a computer on the Internet. The formation of the address is defined by Internet Protocol (IP) and consists of four groups of numbers separated by periods.
ISP (Internet service provider)	A company that supplies Internet access to individuals and companies. Most ISPs offer additional Internet connectivity services, such as Web site hosting.
JavaScript	A scripting language that is similar to, but less capable than, Java. JavaScript code can be included in Web pages to add interactivity and other functionality.
known virus	A virus for which Norton SystemWorks Professional Edition has a definition. *See also* virus definition.

local	A term that refers to your computer, as opposed to a remote computer.
log	A record of actions and events that take place on a computer or handheld device.
network	A set of computers and associated hardware connected together in a work group for the purpose of sharing information and hardware among users.
operating system	A program that ties the capabilities of computer hardware and software to input/output devices such as disks, keyboards, and mice.
partition	A portion of a disk that is prepared and set aside by a special disk utility that functions as a separate disk.
password	A character sequence entered by users to verify their identities to a network or program. The most secure passwords are difficult to guess or find in a dictionary, and contain a combination of capital letters, lowercase letters, numbers, and symbols.
POP3 (Post Office Protocol 3)	An email protocol used to retrieve email from a remote server over an Internet connection.
program	A set of instructions that can be executed by a computer, and are written for a specific purpose such as word processing or creating a spreadsheet. Also called software.
Quarantine	A disk location established by Norton AntiVirus that isolates files suspected to contain a virus so that the files can't be opened or executed.
registry key	A category of information stored in the Windows registry. Registry data describes user preferences, hardware settings, and other configuration information. Registry keys are the means used to index and organize the data stored in the registry.
removable media	Disks that can be removed, as opposed to those that cannot. Some examples of removable media are floppy disks, disk cartridges (such as SyQuest and Bernoulli), CDs, and Zip disks.

script	A list of instructions that can be executed without user interaction. Unlike other types of programs, scripts can be opened with text editors or word processing programs, so they are very easy to change. Examples of scripts include Visual Basic programs and network login scripts.
server	The control computer on a local area network that controls software access to workstations, printers, and other parts of the network.
slack	The unused space at the end of a cluster that results when a file does not occupy the entire cluster. Data from previous files might remain in the space. Once allocated for a particular file, disk space cannot be used for any other purpose, so slack space is essentially wasted disk space.
startup disk	A disk that contains the system files necessary to start your computer. Startup disk usually refers to a floppy disk or CD that can be used to start the computer in an emergency.
TCP/IP	(Transmission Control Protocol/Internet Protocol) The standard family of protocols for communicating with Internet devices.
threat	A circumstance, event, or person with the potential to cause harm to a system in the form of destruction, disclosure, modification of data, and/or denial of service.
timeout	A predetermined period of time during which a given task must be completed. If the timeout value is reached before or during the execution of a task, the task is canceled.
unknown virus	A virus for which Norton AntiVirus does not contain a definition. *See also* virus definition.
URL (Uniform Resource Locator)	The global address of documents and other resources on the World Wide Web and the convention that Web browsers use to locate files and other remote services.

virus	A self-replicating program intentionally written to alter the way your computer operates without your permission or knowledge. A virus attaches copies of itself to other files, and when activated, may damage files, cause erratic system behavior, or merely display annoying messages. Self-replication differentiates viruses from other virus-like computer infections such as Trojan horse programs and worms. *See also* virus-like activity.
virus definition	Virus information that lets an antivirus program recognize and alert you to the presence of a specific virus. *See also* unknown virus.
Virus List	A list that shows all of the viruses for which Norton AntiVirus has a virus definition. It is important to update this list regularly.
virus-like activity	An activity or action that Norton SystemWorks Professional Edition perceives as the work of a possible unknown virus. Virus-like activity alerts do not necessarily indicate the presence of a virus, but should be investigated.
Web browser	A software application that makes navigating the Internet easy by providing a graphical user interface. This lets the user click menus, icons, or buttons rather than learn difficult computer commands. Also called Web client. Two widely used Web browsers are Microsoft Internet Explorer and Netscape Navigator.
Web page	A single document on the World Wide Web that is identified by a unique URL. A Web page can contain text, hyperlinks, and graphics.
Web site	A group of Web pages managed by a single company, organization, or individual. A Web site may include text, graphics, audio and video files, and hyperlinks to other Web pages.
wildcard	A symbol that enables multiple matching values to be returned based on a shared feature. Typical wildcards are the question mark (?) and the asterisk (*). The question mark stands for any single character, and the asterisk stands for any character string of any length.

worm	A program that replicates without infecting other programs. Some worms spread by copying themselves from disk to disk, while others replicate only in memory to slow a computer down.
write-protect	Write-protecting disks prevents viruses from infecting them. To write-protect a 3.5-inch disk, slide the tab on the back of the disk to uncover the hole through the disk. Also referred to as a locked disk or read-only disk.

Service and support solutions

The Service & Support Web site at http://service.symantec.com supports Symantec products. Customer Service helps with nontechnical issues such as orders, upgrades, replacements, and rebates. Technical Support helps with technical issues such as installing, configuring, or troubleshooting Symantec products.

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  Connect to the Symantec Service & Support Web site at http://service.symantec.com, select your user type, and then select your product and version. You can access hot topics, Knowledge Base articles, tutorials, contact options, and more. You can also post a question to an online Technical Support representative.
- PriorityCare telephone support
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Norton SystemWorks™ Professional Edition

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